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EDITORIAL

SESQUICENTENNIAL OF THE UNIVERSITY OF MARYLAND, SCHOOL OF MEDICINE

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The legislature, at Annapolis on December 18, 1807, authorized the founding of what is now the University of Maryland, School of Medicine. On December 29, 1812, the Medical School was authorized by the legislature to constitute, appoint and annex to itself three additional colleges—Divinity, Law and Arts and Sciences, the whole to be known as the University of Maryland. What was to become a great University was thus brought into being.

The founding of a university through a school of medicine was not unique, but the appreciation that a school of medicine must be operated as an institution of higher learning in a university environment was unprecedented in America in 1812.

The Act of 1807 explicitly stated that the Medical College ". . . be established . . . upon the following fundamental principles to wit; The said college shall be founded and maintained forever upon a most liberal plan, for the benefit of students of every country and every religious denomination, who shall be freely admitted to equal privileges and advantages of education, and to all honors of the college, according to their merit, without requiring or enforcing any religious or civil test, or urging attendance upon any particular plan of religious worship, or service; nor shall any preference be given in the choice of a president, professor, lecturer or other officer of said college, on account of his particular religious profession; but regard shall be solely paid his moral character and other necessary qualifications to fill the place for which he shall be chosen."

For a century and a half these principles have been followed. The achievements of the past and the current role of the School of Medicine justifies the vision and faith of the founders.

Early in its history, the School encouraged classical learning; introduced hygiene and medical jurisprudence into its curricula (1833); recognized the inadequacy of time spent in medical education by lengthening the school year to six months (1840); taught auscultation and percussion (1841); introduced pharmacology into the curriculum (1844); operative surgery (1845) and pathology (1847). It was the first or second to enforce dissection (1833). It established in its curriculum compulsory courses in experimental physiology and microscopy (1854); the cytological diagnosis of cancer was initiated in 1853. It was

the first to make an independent chair of diseases of women and children (1867). In 1890 it led the move to raise the standards of medical education and to establish the American Association of Medical Colleges. All of these accomplishments were made by the great sacrifice of individuals, without endowment for the school, and very little public support.

Its faculty has always contained men of ability and sometimes of renown. It has supplied the majority of physicians in the State and a large number in adjoining states and to the nation. Its graduates have attained recognition as public servants, as Surgeon General of the Army, researchers in the fundamental fields of microbiology, surgery, medicine, pharmacology and anatomy, as well as other fields of medical endeavor.

While the last century and a half reveals much to accept with pride, and events to accept with disappointment, the faith, hope and accomplishment that mark men of high principle stands out as a characteristic of the medical school's faculty and graduates.

The future offers an exceptional challenge. A rapidly growing population, the ever increasing advancement in knowledge project the need for the continuation and development of the University of Maryland, School of Medicine into a great center of medical education and learning.

University of Maryland,
School of Medicine
Baltimore 1, Maryland

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REMINDER REGARDING RESOLUTIONS!

Important Notice for Component Medical Societies and Individual Members of Medical and Chirurgical Faculty

The House of Delegates of the Medical and Chirurgical Faculty approved the following recommendations concerning the procedure to govern the reports which are given at the Annual and Semiannual Meetings:

1. All reports are to be received in the office. Those reports which contain recommendations or resolutions must be in the office eight (8) weeks prior to the Annual or Semiannual Meeting, whichever happens to be concerned.

2. When the reports are received, those containing recommendations or resolutions will be sent to the Component Societies for consideration and so that the Component Delegates may be instructed if desired. These reports will also be referred to Council for discussion at its meeting one or two weeks prior to Annual or Semiannual Meeting.

3. Those reports which contain resolutions are to be referred to the Resolutions Committee for consideration.

4. The Council will refer to the Resolutions Committee any recommendations which it feels should be formulated as resolutions. The Council will also transmit to the Resolutions Committee an opinion of the policy involved in the Resolutions Committee.

5. Reports will be presented to the House of Delegates as usual, and it will be suggested as usual that those reports not containing recommendations or resolutions be accepted as printed and distributed.

6. Those reports containing recommendations or resolutions will be considered and acted upon individually by the House of Delegates.

This policy will be followed in all future meetings.

AS A RESULT OF THIS ACTION OF THE HOUSE OF DELEGATES, RESOLUTIONS FOR PRESENTATION TO THE APRIL 1958 ANNUAL MEETING OF THE HOUSE OF DELEGATES, MUST BE IN THE HANDS OF THE SECRETARY, DR. EVERETT S. DIGGS, AT THE FACULTY OFFICE, BY FEBRUARY 19, 1958

Scientific Papers

SYMPOSIUM ON CANCER OF THE STOMACH*

MODERATOR: CALVIN M. SMYTH, JR., M.D.

PANEL MEMBERS: WILLIAM F. RIENHOFF, JR., M.D.
SAMUEL MORRISON, M.D.

DR. AMOS R. KOONTZ, *presiding*

DR. AMOS R. KOONTZ: We come now to het main object of this meeting, that is the Scientific session, and I am going to ask the Panel on Cancer of the Stomach to come to the platform. Before I introduce this panel, I will say that at the end of the discussion there will be a question and answer period so any of you who have questions please write them on the slips of paper on your chairs and send them up to the Moderator. He will either answer the questions himself or turn them over to one of the other members of the Panel to be answered.

Now I will first introduce the panel. Beginning on our extreme right, we have Dr. Samuel Morrison, Associate Professor of Medicine and Gastroenterology, University of Maryland, School of Medicine. Dr. Morrison needs no introduction to you, I am sure, and I am not going to say anything further about him because all of you know about his work in Baltimore, and have known it for years.

The next one is equally well known to everybody in Baltimore, Dr. William F. Rienhoff, Jr., Associate Professor of Surgery, The Johns Hopkins University School of Medicine. His work is known every place and he is known to all of you. I am not going to take any time to give either one of these two distinguished gentlemen encomiums.

However, I would like to say a few words about the Moderator of this meeting, who is my old friend, Calvin M. Smyth, Jr., of Philadelphia. For some reason this meeting tonight has been called the President's Night, the last night of the year, and it has been customary for years for the President to select the speaker for this night. Far be it from me to change any old, established custom. I wouldn't pass up the opportunity for anything in the world, and the first man I thought of was Calvin Smyth, because I kind of like the cut of his gib and the set of his sail. You can expect some unusual things, I can tell you that.

You have a treat in store for you. I remember one year at the meeting of the American Surgical Association, a very distinguished Professor in this country spoke at length about a thing we had all taken as commonplace for years and years and didn't think it needed very much discussion. But there was a lot of discussion. A lot of people got up and discussed it, and finally, after discussion had gone on quite a while Calvin Smyth got up and said that this matter had been well known and accepted by the Surgical profession for years and he thought that all this was much ado about nothing much, so I am sure if anybody pulls anything tonight in this discussion that he thinks is wrong, he is not going to be very slow about saying so.

Now Dr. Smyth, as you know, is Professor of Surgery in the University of Pennsylvania Graduate School of Medicine, and is Director of Surgery in the Abington Memorial Hospital. He comes from one of the most distinguished

* Presented before the Baltimore City Medical Society, Friday, December 2, 1955, 8:30 P.M.

Medical Centers in the world. It is with the greatest pleasure that I introduce to you Dr. Calvin M. Smyth. I am going to turn the meeting over to him right now and ask him to conduct it, and when it is over to turn the meeting back to the presiding officer, who will conclude the ceremonies.

Thank you very much.

1014 St. Paul Street
Baltimore 2, Maryland

DR. CALVIN M. SMYTH, JR.

MODERATOR

DR. SMYTH: Dr. Koontz, Members of the Baltimore City Medical Society, and guests, it is a great pleasure and privilege to come and speak to this Society which, so far as I know, is second only in age to the Philadelphia College of Physicians.

This meeting, as you know, is devoted to a panel discussion of Cancer of the Stomach, and I will now read my prepared paper.

About 25 years ago, the late Dr. George Muller, in speaking upon this subject at a meeting of the Philadelphia Academy of Surgery, made the statement that he doubted if anyone present had a single patient alive five years after an operation for cancer of the stomach. Not one of an audience, including some of the most distinguished surgeons of Philadelphia, could produce a patient. Today while nothing like that bad, the situation is still bad enough, but no longer is the diagnosis of Cancer of the Stomach to be taken as a sentence of death. We have come a long way in that 25 years.

The tragedy of gastric cancer is that the condition too often produces symptoms of any significance, only when the disease has already progressed beyond the confines of the organ. When strictly limited to the local lesion, cancer of the stomach can be attacked with a good chance, or a reasonably good chance, of long term survival. However, when even a single lymph node is involved, the entire picture changes. This is particularly tragic because it is my considered opinion that early diagnosis and not extension of the operation for cancer of the stomach is the only hope of improving on our results.

Cancer in general is a symptomless disease and although we constantly read and hear of the necessity for paying attention to early symptoms, the fact is that such symptoms do not exist, at least in any degree which will cause the patient to consult a physician; and even if a doctor is consulted, unless he be endowed with a high index of suspicion, the patient will probably be treated empirically for "indigestion."

We must not be too critical of the practitioner in this situation, for certainly not every patient who complains of upset stomach or a little indigestion will be willing to submit to various studies required to rule out cancer. On the other hand a great many people, impressed by current propaganda about cancer—you may have read something in Life Magazine—but many patients who have nothing the matter with them will bedevil their physicians to have these examinations made.

One such patient of mine, whose father died of cancer of the stomach, has to my certain knowledge had gastro-intestinal x-ray examinations every three months for several years. The x-ray man recently remarked that he was probably in more danger now from x-ray burns than he was from cancer of the stomach. My remark to him was that some day some x-ray man would question a little shadow that appeared on his films and he would die of fright.

What then are we to do about this distressing situation? It seems to me that the problem should be approached from three angles.

1. Earlier diagnosis which we have already mentioned. The only suggestion I have to make in this connection is that every routine so-called physical checkup include a gastro-intestinal x-ray examination. Too often this is omitted. Even a painstaking physical examination will not reveal anything significant. If gastrointestinal x-ray examination is made a part of such a

check, doubtless some early cases are going to be discovered, but the group of patients who present themselves for such surveys is going to be so small that no significant change in the overall picture is to be expected.

2. I think this is the most important. An uncompromising attitude with regard to gastric ulcer. I don't know what our medical colleague will have to say about this, and really I don't care what he has to say about it because this is what I think and this is what I believe and this is what I am preaching up and down everywhere I go, and I think it is important. I do not mean to imply that benign gastric ulcers become malignant. This subject is controversial and has been before the profession for many years. I think the pathologists are pretty much in agreement the benign gastric ulcer does not become malignant and that the small malignant ulcer of the stomach is malignant from the start; but this is a matter of academic interest only.

The fact remains that it is not possible to make this differential diagnosis except by microscopic examination of the entire lesion. Neither the length of the history, the location of the ulcer, the x-ray appearance, the visualization by gastroscopy, the degree of or absence of gastric acidity, or the general condition of the patient can be relied upon with any confidence. It is true that most patients with cancer of the stomach give a history of recent origin and rapid development, but this is not always the case.

The late Dr. Urban Maes, Professor of Surgery at Louisiana State, many years ago wrote a paper entitled "The Tragedy of Gastric Carcinoma" in which he stated that over 25 per cent of the patients with cancer of the stomach coming to the Charity Hospital in New Orleans, gave a history which had been interpreted as that of ulcer, going back for many years, ten and fifteen years in many instances, only to be found with inoperable malignancy at the time of operation.

It is also often stated that lesions on the greater curvature are very likely to be malignant and that lesser curvature lesions are usually benign. Every surgeon of experience can testify to the complete unreliability of this statement. The same thing applies to acidity—benign ulcer can be present with anacidity, and cancer can be accompanied by hyperchlorhydria. A positive biopsy obtained by gastroscopic examination is of value, but a negative one is worthless, and finally an individual apparently in perfect health can be already carrying the candle of death.

In view of the foregoing, let us not be led into a trap by persisting in medical treatment of ulcerative lesions of the stomach. Let us admit that gastric ulcer is a surgical disease and act accordingly. Too many labor under the delusion that gastric ulcer and duodenal ulcer are one and the same disease, differing only in anatomical location. Duodenal ulcer becomes surgical by reason of its complications and will respond satisfactorily to medical treatment in the great majority of patients. This is not true of gastric ulcer and I believe that if we consider all ulcerative lesions of the stomach which do not heal in two or three weeks to be malignant until proved benign, we will have made the most significant and practical contribution to the improvement of the survival rates in gastric cancer.

3. Finally, regarding the nature and extent of the surgical attack. An adequate operation for cancer should meet certain criteria. They include removal of the lesion, usually with its containing organ and the removal in continuity of all of the lymphatics and adjacent structures to which spread may take place.

The first of the great cancers for which such an operation was developed was cancer of the breast and Halsted's radical mastectomy has long since proven its adequacy. The second cancer for which such an adequate procedure was developed was that of the rectum and the Miles' abdomino-perineal resection has also stood the test of time although after a brief period of restricting its scope, is now being extended by most surgeons.

No operation of comparable adequacy has

been produced for cancer of the stomach. Total gastrectomy has not had any material effect on survival rates, and no patient who has had a total gastrectomy in my opinion is ever a well person; however, he may have been rehabilitated. I hope that Dr. Rienhoff will comment on this phase of the subject, as he and the late Dr. Finney have written extensively about it.

It has been suggested from some of our better known temples of healing that an adequate operation for the stomach should include—and please listen carefully to this—should include "the removal of the entire stomach, a liberal portion of the esophagus, the first portion of the duodenum, the left lobe of the liver, the body and tail of the pancreas, the spleen and the transverse colon." Is not the last state of such a person worse than the first?

I have up to this point refrained from quoting statistics because I have tried to confine my remarks to the broad general aspects of this subject. A few statistics, however, may not be out of place.

Just before coming down here, I reviewed 82 personal cases of cancer of the stomach. Of these 82, 26 per cent were frankly inoperable to the extent that nothing could be done but open and shut. 28 of the 82, or 34 per cent were resectable. I hope these figures are right because I can't do arithmetic and the little girl in my office did it—but of these the disease was confined to the stomach in only 7 or eight per cent. Think of that. In only 7 out of 82 patients who came to Abington Hospital with cancer of the stomach were we able to do what we put down as resections for cure. But now—and here is what I mean to say that this must not be considered a hopeless disease; we can do something about it. Of the 7 patients resected for cure, 6 are surviving five years or more; but of those who had supposedly palliative resections—and I think this is extremely important—five are alive and well five years or longer making an over all survival rate of five years or more of 39 per cent. Certainly this is nothing to shout about but it is much better than the statement that I quoted the late Dr. Muller of 25 years ago when he said no surgeon in the audience could produce on sight a single patient living five years after an operation for cancer of the stomach. Of course in the day of which he was speaking, many of the operations for cancer of the stomach were, in the light of our present knowledge, inadequate and could not be expected to produce a cure.

This has led me to believe that perhaps lymph node involvement does not always mean what we have thought it meant. Is it not possible that the lymph node may be a barrier to rapid dissemination and that that barrier may take a long time to breech.

The most remarkable illustration of this is a case which has been referred to several times in the literature and which was operated upon by Dr. John Finney, Sr. His son John Jr. related it to me. I am sure that many of you have heard of this patient. The patient had a carcinoma of the stomach with metastases to five glands in the gastrohepatic omentum. A partial gastrectomy was done for palliation. Dr. Finney made a free-hand sketch of the operation showing the location of the glands. Eighteen years later, having been lost to follow-up for a long time, he turned up in a tuberculosis sanatorium in North Carolina, where he subsequently died of tuberculosis. At autopsy the five nodes all showing adenocarcinoma, primary in the stomach, were found in the exact location shown in Dr. Finney's sketch and no other evidence of cancer.

Another case of my own whom I operated upon in 1943, had a huge growth in the antral portion of the stomach with metastasis to the great omentum from which a segment was removed for microscopic examination and which proved to be adenocarcinoma. I performed an anterior gastroenterostomy for palliation without disturbing the growth which was firmly fixed to the posterior parietes. I solemnly informed her family that she had no more than six months to live.

Now let me say that in the years following

this, I have gotten beautifully over making that kind of a statement and today I will say, that in only one instance will I make definite prognostications and that is if a man is to be hanged at 9 o'clock tomorrow morning—I will say that he probably has not more than 24 hours to live, but outside of that, no. This patient's son was sent home overseas to see her before she died. On the third postoperative day, she expressed a desire for a steak which she got. She said it was her most satisfactory meal in a long time. Without going into further detail, may I say that she is in excellent health today. On the anniversary of her operation she sends me a rather cryptic postcard on which she sets forth her weight, her hemoglobin and certain other pertinent data, and she always before she signs her name concludes with a rather subtle question "do you think there could possibly have been something wrong with your prognosis"?

Now, a final case I would like to cite to you and then I am through, is that of the distinguished Philadelphia surgeon who went to the Mayo Clinic and had his stomach resected for cancer. He had an extensive gland involvement in both his gastrohepatic, gastrocolic omentum, and the pathologist reported after examination of the specimen removed, that both the proximal and distal lines were through histologic malignancy. I think that we will all agree that that might be considered as a sentence of death—but was it? Twenty-five years later, at the age of 82, this gentleman died following an automobile accident.

I cite these three cases to illustrate the fact that there are many things which we do not know about the biological aspect of carcinoma of the stomach. If any of these three people had been subjected to such radically extended operations with the one I referred to, they could have been cited in support of such procedures. I also cite them to support the thesis that surgeons should not attempt to play God, or to prophecy.

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Abington, Pennsylvania

DR. CALVIN SMYTH: I believe that our next participant in this panel discussion is Dr. William F. Rienhoff, Jr., who is well known to all of you, and I, with you, await with great anticipation what he has to say.

DR. RIENHOFF: Mr. President, Members of Baltimore City Medical Society and guests. I agree with everything Dr. Smyth has said. I also agree that when one removes the left lobe of the liver, the tail of the pancreas, the spleen, the omenta, the transverse colon, etc., it should be difficult to decide which you are going to send back to the ward, the specimen or the patient. That has become a very serious problem. Now everybody admits that the cure or even palliative treatment of carcinoma of the stomach poses a most difficult problem, indeed a gloomy situation, but, after all, one must put gloom behind him when dealing with individual patients.

When Dr. Smyth spoke about total gastrectomy, I recalled that when I was resident and Dr. Finney was Professor of Surgery, in 1924, we performed five total gastrectomies. We looked up all the literature and found that a patient had been operated on at the Hotel Dieu, in Paris, by Dr. Punier for an adenocarcinoma of the stomach. An inadequate subtotal gastrectomy had been performed, according to our standards today. The patient came back 25 years later and died of lobar pneumonia. At autopsy adenocarcinoma, with the same identical histological structure, was found in the retroperitoneal glands. So that, after all, carcinoma can lie latent and, as Dr. Smyth has said, we do not know the biological characteristics of the various growths, even though identical in histological appearance.

Cancer of the stomach remains today the most distressing of surgical problems. It is a surgical problem, because operation offers the only chance of cure and the only means of palliation in those that cannot be cured. It is a distressing problem because this is the commonest of all cancers, because for the most part it affects men in the prime of life, because it is usually silent and escapes recognition till it causes a general

deterioration in health that is unmistakable; and because it carries a worse prognosis than any other growth.

It strikes down men and women, but more commonly men, at a time when their early struggles seem to be bearing fruit, and when they are most useful to their country and their profession and most needed by their families.

Nothing is known about the cause of cancer of the stomach, except that in groups with achlorhydria, such as those suffering from pernicious anaemia, the incidence is three times that in the general population. It is probable that the incidence is much higher, for 64 per cent of patients with cancer of the stomach are found to have achlorhydria at the time of their first investigation. It has been assumed (and this assumption, like many others in clinical medicine that are cheerfully accepted and confidently taught, has no shred of evidence to support it) that the cancer has caused the achlorhydria; the reverse is more probably true, for the achlorhydria of cancer has no relation to the size, duration or pathological grouping of the tumour, or to the part of the gastric mucous membrane which it has destroyed. Chronic gastritis, which is almost universal in those whose stomachs are unprotected by the anti-bacterial shield of hydrochloric acid, may therefore be suspected as a precursor of cancer.

The frequency of gastric cancer varies considerably in countries that keep reliable statistics, but in all it is the commonest cause of death from malignant disease. To suggest that the incidence may bear a relationship to the extent to which the inhabitants of those countries habitually maltreat their stomachs is to pay a wholly undeserved compliment to the temperance and dietetic discretion of the U. S. A. Heredity, in some families, seems to play a part. Napoleon, his father, his brother, and two sisters, all died of gastric cancer.

The prognosis of cancer of the stomach is worse than that of any other common growth. The operability rate, the resection rate and the immediate mortality have improved, but the hospital mortality remains round 25 per cent, and the five-year cure rate round 5 per cent. Some surgeons claim a mortality one-fifth of this and a cure rate five times as high. The surgeon who is 500 per cent better than his fellows has not yet been born, and the simple explanation of these magnificent figures is a pathological department that draws a very hazy boundary between ulcer and cancer. Gastrectomy for ulcer should carry no mortality.

There have been several attempts lately to belittle the malignancy of gastric cancer. It has been said that cancer of the stomach follows the same laws as other cancers and is equally amenable to surgical extirpation, and if patients could only be seen in an early enough stage and submitted to an operation sufficiently radical, the results would be as good as they are today in cancer of the breast. That is probably not true.

All cancers spread by direct extension in the tissue in which they arise, by lymphatic permeation and embolism to the regional lymphatic glands and by dissemination in the blood stream. Cancer of the stomach does the same; but it also spreads, and often spreads very early indeed, by coelomic implantation, to every part of the abdominal cavity, a propensity it shares only with papillary cancer of the ovary. In this propensity lies its particular malignancy. It is the discovery of scattered peritoneal nodules, rather than the extent of the growth, the presence of enlarged lymphatic glands or the discovery of metastases in the liver, that most commonly proves the case, hopeful on clinical grounds, to be inoperable. It is recurrence in the peritoneum, often at the bottom of the pelvis, rather than in the gastric stump, the splenopancreatic glands or the liver, that usually kills the patient after what seems at the time to be an adequate and promising resection. In the opinion of many surgeons a gastric cancer ceases to be curable when it has reached the peritoneal coat of the stomach, though it may remain

operable for months or even years afterwards. In this respect the growths involving the fundus and cardia are more benign than those at the pylorus, in that they spread less widely in the submucous coat and are less prone to peritoneal dissemination.

This is a gloomy picture; but in medicine, and particularly in surgery, we must leave gloom behind us when we are dealing with individuals. The course of any particular case of cancer of the stomach is unpredictable. Patients often come late in the disease, but delay does not necessarily mean a bad prognosis. The resectability rate is higher in those whose symptoms had lasted for six months to three years, than in the group with a history of less than six months. The discovery of a really large tumor does not in itself mean a hopeless prognosis. Age alone is no bar to operation. Only when distant metastases can be demonstrated beyond doubt is there any justification for the decision of inoperability. Laparotomy offers the one hope in a disease that is otherwise hopeless, a hope of curing a few, a hope of relieving more than half.

It has become the fashion in diagnosis to subordinate the history to such objective diagnostic facilities as the x-ray and various laboratory procedures. It takes time and patience to elicit a good history and, above all else, it takes experience and wisdom to evaluate it. The man with the experience does not always take the time required for the history and the young man with the time but not the experience cannot properly evaluate it. If one is waiting for a gastric cancer to become obvious, then such unimpressive local symptoms as a little heartburn, flatulence, distention, or other disquietude in the abdomen of a recurring or persistent nature, will pass unheeded. Trivial local symptoms will betray the "silent" cancer, however, if one attaches the proper importance to such associated systemic symptoms as persistent and increasing anorexia, a loss of energy and even disposition, a sense of apprehension, and such signs as a minor, perhaps unnoticed loss of weight, an early and increasing anemia and perhaps a slight fever (which physicians too seldom ascertain in their office). Such systemic or constitutional symptoms of early cancer just do not occur in benign gastric ulcer and no disease can be regarded as "silent" that produces them. I believe it is unwise to assume that systemic symptoms do not cccur early in gastric cancer. A corollary to this would be the frequency with which such symptoms as cough, loss of weight, slight fever and asthenia occur in early pulmonary tuberculosis, but are not properly evaluated until positive x-ray findings are observed.

The classic symptoms, anorexia, vomiting, pain, loss of weight, are all late symptoms, and the early symptoms are merely those indefinite hints that all is not well that are common to all cancers. When a man or woman over the age of forty shows an appreciable acceleration of the gradual deterioration that characterises the journey of all mankind from the creche to the cemetery; when they are inexplicably disinclined to do things they enjoyed doing a few months before; when they turn down invitations; cut out the third set at tennis or the afternoon round at golf; take a taxi instead of a walk, or the elevator instead of the stairs; refuse a second helping or one for the road; when they look a little paler, a little thinner, a little more worn, a little older—to the extent that we or their relatives remark upon it—we should think of cancer of the stomach as one of the more probable explanations. We should remember that voracious eaters do not get indigestion in middle age, that gastric or duodenal ulcer rarely starts after forty. We should not treat anaemia with iron or indigestion with alkalis in our middle-aged patients, without turning over the possibility of gastric cancer in our minds. A test for occult blood in the feces will tell us whether we should investigate further.

In the statement that gastric ulcers never start after forty, "never" is used in the sense of hardly ever. They may, but the ulcer that appears for the first time in a middle-aged

stomach should be accepted as malignant till it has been proved by rapid healing confirmed by radiography and gastroscopy to be innocent. I was brought up in the belief that a peptic ulcer may become malignant but I have ceased to believe in this and shall remain incredulous till I see such event take place. In my own practice and that of my friends over the last quarter of a century I have never seen the malignant transformation of a peptic ulcer. I have been shown cases as such by colleagues, but every time there was something in the history—a peculiar site of the ulcer, a late age of incidence, an irregularity in the symptoms, a failure to respond to treatment, or an absence of real remissions—that cast a doubt upon the initial innocence of the lesion. I have been shown specimens as such by pathologists, but all they could demonstrate was an ulcer that showed cancer cell at one side and healing scar tissue at the other. Cancer of the stomach can be one of the most chronic as well as one of the most rapid growths. Such slow-growing cancers, subjected in the early part of their history to gastric digestion, provide the pathologists with their ulcer cancers and peptic ulcer surgeons with their sales talk.

Lastly, we should implore our radiological colleagues to tell us what they see and not what they think. A radiologist can say that a cancer is large, but he cannot say that it is inoperable unless he can demonstrate distant metastases.

The position of the doctor with regard to cancer of the stomach then is a relatively simple one. He must suspect the disease in any middle-ager who is off color, and must set out at once to confirm or disprove that suspicion. Having obtained confirmation he must advise immediate laparotomy, unless the discovery of secondaries in the neck, the liver, the peritoneum or the pelvis shows that the position is hopeless. Radiotherapy, chemotherapy and organotherapy are as useless in this disease as psychotherapy; whereas operation can usually ameliorate, often relieve and sometimes cure.

Where it is found that there are no peritoneal nodules and no or few glands the right operation is a radical gastrectomy, subtotal for pyloric growths, total for cardiac and fundal ones. There is much loose talk today about the need for total gastrectomy in all cases, and the totalitarian say with some unction that to remove part of the stomach for cancer is like removing part of the breast for cancer. Let us, however, resist the temptation to run surgery on catch-words. Surgeons remove all the breast for cancer of the breast, but they do not remove all the colon for cancer of the colon, all the oesophagus for cancer of the oesophagus or all the skin of the arm for cancer on the back of the hand. To call an operation radical does not mean that it is huge, but merely that it goes to the root of the matter. In cancer a radical operation is one that removes in continuity the primary growth, as much of the organ in which it arises and of neighbouring tissues as can conceivably have been invaded by direct spread, the lymphatic channels draining the part and the lymphatic glands in which they terminate.

The only difference between a really radical subtotal gastrectomy and a total gastrectomy is that in the former the lymphatics draining the cardiac orifice and fundus and passing to the left into the hilum of the spleen and behind the pancreas with the splenic vein, are not removed. This drainage is unimportant in pyloric growths that are resectable. The dangers of recurrence in such growths, if the operation has been properly done, are in the head of the pancreas or in the peritoneum, and not in the gastric stump. On the other hand, in the hands of the same surgeon subtotal gastrectomy has a mortality only half that of total gastrectomy.

In growths that are incurable because of peritoneal deposits, multiple glandular involvement, or nodules in the liver, gastrectomy is still the best palliative operation if the proximal and distal lines of section through stomach and

duodenum can be made through tissues uninvaded by growth. The patient will lose his pain, regain his appetite, often put on weight, and when he dies, will probably die painlessly, unaware that he is suffering from the original complaint.

I have found gastro-jejunostomy an entirely unsatisfactory operation in cancer of the stomach. Gastro-jejunostomy is in any case a technical gem but a therapeutic disappointment; and the only form in which it is ever a mechanical success is in the old (and happily nearly defunct) operation of posterior retrocolic anastomosis. This variety is impossible in cancer, and the anterior operations are poorly-functioning distortions. If diffuse involvement around the pyloro-duodenal junction prohibits palliative gastrectomy, an exclusion operation of the Devine type gives a very satisfactory relief from symptoms. When the growth extends along the lesser curve nearly to the oesophagus, exclusion is clearly out of the question, but a very satisfactory by-pass that gives added comfort for several months may be made by dividing the jejunum about two feet below its commencement, implanting the proximal end of the distal bowel on the fundus, and deviating the contents of the proximal loop to the jejunum lower down.

At worst these operations all give the patient something and something is better than nothing.

I have no patience whatsoever with people who seem to have an oath of allegiance—the physician with a patient who has an ulcer that "we won't separate until death do us part," and they go on and on, and on treating medically these patients with ulcers of the stomach, when they don't know whether the lesion is malignant or benign. One cannot tell that from a gastroscopic or x-ray examination. Any lesion in the stomach that doesn't heal within three months certainly should be explored and that includes chronic gastritis and polypi of the stomach and any ulcerative lesion. I am not talking about the pathologist who draws a hazy margin between malignancy and benignancy. Some years ago there was a report at the Mayo Clinic that 75 per cent of the ulcers of the stomach were malignant. Now that per cent has all been reduced and we realize that is not true. I am not at all certain that a benign ulcer ever becomes malignant. I think they are probably malignant in the beginning.

Often times one hears that we haven't got 5 per cent of 5 year survivals. Well, that is just literally not true and a year ago I started following up the few cases I have operated on, which come to 177 (Fig. I), and there were 81 that were operable. I think therefore that when you see an ulcerative or precancerous lesion as we see it now in our state of ignorance, they should be explored, and all people that have indigestion or dyspepsia or whatever you want to call it, when they have been vigorous people, shouldn't be watched interminably; they should be explored.

We thought at the time that it was possible that we could help them and possibly cure some. Ten were lost track of; when they left the hospital, they were perfectly well so they weren't an operative mortality. These figures correspond with those from the Mayo Clinic, the Leahy Clinic and others, and I am sure that is probably the average. Of those patients dying after various

Carcinoma of the Stomach

Total number of operations for carcinoma of the stomach			81	45.8%
	Number known living	25	35.2%	
	Number known dead	46	64.8%	
		71	100%	
	No information	10		
		81 cases		
Total number of inoperable carcinoma of stomach			96	54.2%
			177 cases	
2.4%	Known living	1		
97.6%	Known dead	41		
		42		
	Unknown	54		
		96		

FIG. I

periods of time, of the 71 cases followed, six cases lived over five years, two of them lived 13 years, one 11 years, one seven years, two 5 years or more, and four, three years. After all, depending on the age of the patient, that is worth while. That is palliation. If you'd have left them alone they'd either have obstructed or bled or in other ways had a miserable life.

Now, those that are living—and this is the point that interests me—out of the 71, there are 25 that are still alive. Now two of them were done when I was resident in 1924. One was a partial gastrectomy, one a total, but at any rate two of them are living over thirty years. Of the five-year survival of 71 cases followed, twenty are alive, or 28 per cent salvaged.

I think that with a lesion in the distal portion of the stomach one should leave some of the stomach, a small cuff of the stomach. I am absolutely 100 per cent against doing a total gastrectomy unless the lesion is in the juxtaoesophageal portion or in the cardiac end. I think you ought to leave a gastric cuff, no matter how small that cuff is. Your mortality will be lower and you will not make a gastrointestinal cripple.

In regard to lymph glands, I don't think that one will get any better results doing duodenectomies as in the Whipple operation for carcinoma of the head of the pancreas, or doing viscerectomies or practically anoesophagostomies. I don't think you are going to get any increase in longevity, because all but four of the patients in my series had subtotal gastrectomies and while some of them, as Dr. Smyth has said, go along and live for a long, long time, they probably aren't cured of carcinoma. If you cut serial sections through their whole body you would probably find carcinoma some place, but for some reason or other with the mother tumor removed, I won't say they get an immunity, they get some balance that prevents that from spreading.

Of course, we have always known that the carcinomas of the stomach that have metastasized to the liver, shorten the patient's postoperative life, more than involvement of lymph glands.

I think people with achlorhydria frequently develop carcinoma of the stomach, as in cases of chronic atrophic gastritis. They are particularly prone to develop carcinoma of the stomach, so I think that when you have an ulcerative lesion or a chronic gastritis that those patients should be explored within a reasonable length of time, say two months or three months, after they commendably adhere to a medical regimen and stay in bed or whatever the medical man wants them to do. The only way we are going to salvage these people is exploring on suspicion. Under our present anesthesia and technique, I think that exploration is relatively safe.

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DR. CALVIN SMYTH, JR.: The next participant is Dr. Samuel Morrison, Associate Professor of Medicine and Gastroenterology, University of Maryland School of Medicine.

SAMUEL MORRISON, M.D.

Dr. Smyth, Dr. Rienhoff, Ladies and Gentlemen, it is really a pleasure to take part in this symposium and it is a unique experience to be up here between two such surgeons. As you know, our time for opening remarks is limited and I will therefore restrict my comments to three items hoping that I will have the opportunity to talk in more detail later. Especially would I like to comment later, if time permits, on the statistics which have been presented by Doctors Smyth and Rienhoff. Dr. Rienhoff was kind enough to let me see his yesterday.

Item # 1, has to do with diagnosis.

Cancer of the stomach is a surgical disease. I could state my purpose here in a sentence or two. We, on the medical side, see most of these patients; whether we be General Practitioners or Internists, we usually see them first and therefore the responsibility for making an early diagnosis falls upon us. Any time lag increases

the mortality, and so when a patient has symptoms and does not report to the doctor there is already a lag in time and an increase in mortality.

When he reports to the doctor and time is lost before the diagnosis is made, mortality rate increases. Some of us may give a prescription and the patient may feel better, as many do (even patients with malignant disease) but that loses a lot of time.

Another loss of time which is less excusable is the one which the surgeons criticize so much; it has to do with the lag between the time of diagnosis and the time of definitive therapy, and that definitive therapy is surgery *and radical surgery*.

To be completely modern, there is another lag and that is the waiting list in the hospital. This, I think, is almost inexcusable because once a diagnosis of carcinoma of the stomach has been made, that patient is urgent and almost an emergency. It is a queer thing in this modern generation that a person who breaks a leg is admissible to a hospital, but a person with cancer of the stomach goes on a waiting list, though we know every day lost increases the mortality.

To make a diagnosis of carcinoma of the stomach by following the text book, is to look for late diagnostic features and thus fail to detect early operable and consequently curable lesions. In summary, time lag is the most important factor in mortality.

The second item has to do with differential diagnosis, and here, I would like to ask a lot of questions of the members of the symposium and also of the audience.

First—How many gastric ulcers are malignant from the beginning? What proportion of benign ulcers undergo malignant degeneration and is it excusable as the surgeons may not agree to treat these benign ulcers (justifiably diagnosed benign) according to certain criteria. Is it justifiable to treat them according to a medical program advocated by Sara Jordan, a program which she has titled. "Vigilant Conservatism?" Treat them not for three months, as Dr. Rienhoff suggests, but for one month and if they heal completely according to reliable measurements, especially the x-ray, then they are benign and should be cured. Is that a fair thing to do? Or is Walter Palmer correct when he says that we should follow those patients in whom we have good cause to believe their ulcers are benign for eight weeks?

Dr. Rienhoff is willing to wait three months. I wonder if that is a reasonable period. Is this acceptable and proper treatment, if we wish to decrease the mortality figures and thus increase the curability rate. Why are we so uncertain about these matters? Is it because diagnosis is difficult and often not precise?

Do malignant ulcers heal temporarily? I think they do, but to what degree and by what measurements? Is the roentgenologist able to pick up that very small defect representing the residual lesion? Some of us doubt it. What does one do about a gastric ulcer which recurs in the same area? What is the status of gastric cytology? What about the gastric ulcer which appears so characteristically in the x-ray but is associated with an absence of hydrochloric acid?

What about the increased number of carcinomas that occur in pernicious anemia and is the factor there the achylia which is present or does it have something perhaps to do with the absence of the intrinsic factor? Is achlorhydria alone a contributor to carcinoma of the stomach?

How many patients with hypertrophic gastritis develop malignant disease; especially the giant hypertrophic gastritis which in some instances appears in the x-ray to be malignant; even the clinical picture may be one of malignancy. The patients lose weight, have anemia and lose appetite. Should they be operated upon? And is the gastroscope a reliable and dependable instrument, can it get a good look around the giant folds? Is the gastroscope able to say there is no malignancy hidden somewhere in between these folds? And what about polyps which occur in pernicious anemia and those which are found in the absence of pernicious anemia. Should they all be removed?

I shall take a moment to tell you about a patient who had hypertropic gastritis and pyloric polyps. He refused to be operated upon. Incidentally, this big fat fellow was *very anemic* but he came in because he had *one black stool*, but his anemia was quite severe. The x-ray showed hypertrophic gastritis of extreme degree and multiple polyps around the pylorus. Since he refused surgery, he was urged to be x-rayed in a short period of two weeks. He felt fine, his blood count was better, but the x-ray showed that his condition had worsened; he had more polyps and his hypertrophic gastritis was said to be worse. A few weeks later he returned (he had again refused surgery), feeling worse but the x-ray showed definite improvement. In fact the roentgenologist, a very capable man, doubted that the polyps were still there. Now, I know polyps do not come and go, but I wonder what we do about this kind of patient.

Thus there are many questions which one could raise. Perhaps in these questions one finds a partial explanation of the reason why, on the medical side, we do not make more and earlier diagnoses. The desirable thing is to diagnose the condition when the patient is asymptomatic or presymptomatic. Don't wait for the text book picture; even a mild anemia, with occult blood in the stool and perhaps a questionable x-ray defect, may be enough, but there are those of us who are the product of our upbringing which from my view as an Internist is a *medical upbringing*, and we feel that to do a radical operation on a patient in whom there is every reason to believe a benign ulcer exists, say on the lesser curvature, is to be questioned. We, with our non-surgical training evaluate the location of ulcers and consider their tendency to malignancy or benignancy. None the less, an x-ray ulcer which appears benign and is on the lesser curvature we feel can and should be treated medically for a short period of time; perhaps a month. This again poses the problem raised by those who say all gastric ulcers should be removed surgically if our curability rates are to be improved.

The final and third item has to with post-diagnosis. There are those patients who are incurable and I am surprised and chagrined today to find that so many of our medical group (surgeons are not confronted with it quite so much) feel that nothing can be done for these patients. Since this is not so, what can we do?

I think it is hackneyed but important to tell you that you must suffer it out with each of your patients. The judicious use of narcotics is recommended. Thorazine, a perfectly remarkable remedy, is very helpful in combination with narcotics. The use of nerve blocks to lessen pain, even if only for a short period of time, is recommended. Palliative surgery is important; and here I must quote a patient whom Dr. Wise operated on some ten years ago, a man with a very extensive defect in his stomach and uncomfortably symptomatic. Dr. Wise did a high gastroenterostomy. We wondered if it would be mechanically and physiologically workable, but that patient gained weight, began to work and for a year-and-a-half was almost asymptomatic until he had an exsanguinating hemorrhage. Exsanguinating hemorrhages, I might comment, are not very common in carcinoma of the stomach. Not only palliative surgery of this degree but even radical palliative surgery should be considered in some of these patients who are waiting to die.

Perhaps this paragraph can best be summarized in Palmer's words: "The physician with kindness, sympathy, courage and resourcefulness must tread the road *with* the patient, relieving his distress as much as possible and supporting his morale until finally the journey ends before the patient realizes that death is at hand."

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QUESTIONS AND ANSWERS

DR. SMYTH: Now I hope that there will be some questions from the floor. I think it is rather unusual to find three people in such complete agreement. I think it is very unusual to find a medical gastroenterologist saying that he

will treat an ulcer for two or three weeks and to find a surgeon say that he will treat them for two or three months, but I don't think that we ought to pay too much attention to these time limitations. I'd be perfectly willing to have a gastroenterologist like Dr. Morrison take a little more time to use as he calls it "vigilant conservatism." We are not interested in medical men like Dr. Morrison. These patients are going to do well under their care, but we are interested in the doctor around the corner who treats the patient with "stomach trouble" for a year, and I want to repeat what I said in the beginning, that we cannot rely upon the x-ray or the location of the lesion to tell us whether it is benign or malignant.

Dr. Morrison cited one case where for a time the patient clinically improved but the x-ray man said that he was worse, and then later on the patient came back and said he felt terrible but the x-ray man said he was getting better. Now, what are you going to do? The fact of the matter is that the x-ray man can't tell you much about what is going on in that stomach. You can have a large lesion with a crater, which appears from the x-ray standpoint to be healing, but is only filling that crater up with cancer. The gastroscopist can't tell you anything unless he gets a positive biopsy. A negative biopsy may be taken from some small portion of a lesion which will not reveal malignancy and I think that that is most important here, to take the stand that gastric ulcer is a surgical disease.

In regard to palliative operations, I think palliative operations are perfectly justified if they palliate. If we open a patient and find that he has something which we regard as hopeless from the standpoint of cure, but who has a severe grade of obstruction, we are bound as conscientious surgeons to do all that we can to relieve that obstruction. Maybe we don't prolong his life five minutes but we make him live much more comfortably.

On the other hand, for a surgeon to go into one of these cases which we know is beyond hope, and indulge in one of these extended operations, is just to show that he can do it. That, in my opinion, is just surgical exercise and we ought not to turn our operating rooms into gymnasiums. Regarding these extended operations (and I gather Dr. Rienhoff agrees with me) I don't think they make any sense. As far as statistics are concerned, people that report these amazing cures following mutilating operations, all I have to say is that I don't believe it. Doctors can be liars like anybody else.

I would now like to ask Dr. Rienhoff whether he really meant three months or three weeks?

DR. RIENHOFF: I'd agree with Dr. Morrison but on the other hand if you have recurring benign ulcer that has destroyed the mucosa and the muscular coat, it may have a little thin bit of epithelium grow over it but it will recur again and I am not at all certain that an old, chronic ulcer can't still be an ulcer, and so I think you should delay operation for some weeks. Three months may be a little bit long, but as I say, some medical men have to be lead by the hand and also you've got to lead the patient by the hand. We have all had the experience with people we know who are opposed to surgery. It takes a great deal of persuasion on the part of the family and the physician and the surgeon to convince them thay they should be operated on. Therefore I say, give them the full extent of time to convince them. I don't think that in a chronic lesion even if it is a malignant ulcer, a low grade ulceration is going to do very much harm in three months.

I saw Napoleon's stomach before Hitler bombed London, and he was supposed to have ulcers of his stomach for many years, which added to his crotchety disposition, and I found out that his father died of carcinoma, and he had a sister who died of carcinoma and two brothers died of carcinoma. I don't think you can wait indefinitely, but I do think you've got to be a little bit cautious, and if, as I said before, if patients commendably adhere to a medical regimen, and by that I mean that they ought to be put in bed for at least three weeks or a month, then if this ulceration doesn't heal, I think the

physician or the surgeon should start persuading them that they should be operated on.

The interesting thing is that a great many of these carcinomas of the stomach can be very chronic and they are not all anaplastic; they can go for a number of years and still be operable. Alton Ochsner says only eleven per cent of their series at Tulane were tumors that were confined to the viscus and no metastasis formed any place. Only eleven per cent. All the rest of them either had lymph gland or distal metastasis.

Now, if you are going to have only eleven per cent confined to the viscus, naturally your results ultimately are not going to be too good. The only way, I feel, that you can combat this problem is to take a more optimistic view of it and when the physician and the gastroscopist can't be certain, these patients should be explored.

Now, maybe my three months is too long, I'm perfectly willing to make it two months, or six weeks if you want to.

DR. SMYTH: We now have many interesting questions coming up here from the floor. Most of them are not addressed to individual members of the panel but are general in character. I have here, however, one addressed to Dr. Rienhoff, specifically, and one to Dr. Morrison.

Q. Would you comment on the incidence of gastric ulcer undergoing malignant degeneration. This may be answered, if you so wish . . . Treatment for herniation of gastric mucosa and the symptoms.

DR. SMYTH: I'm not sure if you understand that question, Dr. Morrison, and I confess I don't but I'm glad to have you answer.

DR. MORRISON: I hope I can be heard at this microphone. The general feeling about malignant change in gastric ulcer is a percentage of about ten to twelve. However, as with most things, there are different percentages from different places. Walter Palmer says the number of their benign ulcers which were found malignant was 4.1 per cent. The average percentage from many other places is about six per cent. Therefore, this much can be said for the surgeons, that it is as great an error not to remove a so-called benign ulcer, which may become malignant, as to leave a malignant ulcer which is thought to be benign. You had better take a benign ulcer out if there is any chance of it being malignant, and if that chance is as high as 12 per cent in some reports, perhaps the surgeons are right that most of these ulcers should be removed, providing that the patient is treated with vigilance for at least a month if there is justifiable reason for thinking that one is dealing with a benign ulcer.

As for prolapsed gastric mucosa into the duodenum, it is an unrelated topic, but I am glad to answer the question. I too believe it is much more symptomatic than most roentgenologists and internists think. When symptomatic, it is a condition which gives considerable discomfort; it simulates ulcer and is not uncommonly associated with ulcer but only responds to ulcer therapy when an ulcer is present, otherwise it responds better to a simple, soft diet and antispasmodics.

It should be said that most patients with prolapsed gastric mucosa in the duodenum are asymptomatic. There is the occasional patient who bleeds badly, and these are those patients who have obstructed, and to relate it to the topic of tonight, they are patients with such severe prolapse as to simulate carcinoma involving the pylorus. Some patients with prolapsed gastric mucosa into the duodenum have been treated surgically.

DR. SMYTH: I hope that answers the gentleman who sent up that question.

Q. (for Dr. Rienhoff): Why not do a partial gastrectomy? Why not do a proximal gastrectomy for carcinoma of the cardiac end of the stomach?

DR. RIENHOFF: I think you do. Appleby, from Vancouver, recently wrote a paper that we discussed at the American College of Surgeons. Ulcerations of the cardiac end as all surgeons know, can be very difficult technically, and Owen Wangensten and several others have devised

various procedures, but Appleby quoted a number of surgeons in England and France who were doing vagotomies, and Finney, pyloroplasties or gastroenterostomies and then waiting to see if the ulcer healed within thirty to sixty days. Often surgeons are hard pressed to create a satisfactory anastomosis, and naturally there is a higher mortality. On the other hand, there are several instances in the literature in which vagotomy was done for ulcers, and although the patient did not have very marked hyperchlorhydria then developed a much lower acid content and felt that they were creating a situation that might lead to malignancy. Now that, of course, has yet to be proved, although there is some literature on that subject.

I must admit, and I think all of us will, that ulcerations in that region are terrifically difficult. Personally in my own limited experience—and there is quite a paucity of literature on ulcerations of the cardia near the esophagus that are benign, most of the ones that I see—a very small group relatively have been ultimately malignant; so we are impaled on the horns of a dilemma as to what to do, and I am just not sure about that.

I think that they certainly should have medical treatment first, and I'm not so certain that maybe Appleby and some of his surgical friends might not be right.

There is another question you gave to me, Dr. Smyth, on ulcerations in cirrhosis of the liver.

The only cases I have seen in cirrhosis of the liver bleeding have been from esophageal varices, or varices that extend down into the cardia, and usually those people have a hypertrophic gastritis because most of them, as you know, are chronic alcoholics, and I have often wondered if that chronic alcoholism isn't the factor that makes them have this chronic hypertrophic gastritis and perhaps some ulcerations rather than cirrhosis. I don't believe that cirrhosis itself produces ulcers of the stomach. I think the bleeding usually comes from portal hypertension in the various vascular derangements.

DR. SMYTH: I would think that was correct and that the patient with cirrhosis of the liver has a gastric ulcer is probably coincidental and has nothing to do with his ulcer.

Q. (for Dr. Smyth): What is your procedure at the operating table with small suspicious gastric "ulcer?"

DR. SMYTH: Well, of course you can't make a diagnosis with the naked eye, of the benign or malignant nature of an ulcer. If he has an ulcer which has met the indications for operation, you are at least going to cut that ulcer out and if you think it is malignant, you can get help from the laboratory at the time. Now in general—I don't know whether this means the extent of the resection or not—but in general it is not necessary to resect as much of the stomach for gastric ulcer as it is for duodenal ulcer because the success of surgical attack on duodenal ulcer depends upon getting rid of the acid. You all have heard of the aphorism, "no acid, no ulcer." Now that isn't true of gastric ulcer. Hydrochloric acid is a normal habitant of the stomach.

If you really have a benign gastric ulcer, almost any operation will be satisfactory. Even a wedge excision with gastroenterostomy.

Now we have another question here. I hope the other members of the panel don't mind my answering some of these myself, but time is running out and we appreciate your being here very much, and your patience.

In cases which survive operation for carcinoma of the stomach for a long period of time and stomach tissues found in lymph nodes, is this tissue malignant, what is the evidence, is it metastatic, what is the evidence?

A. (DR. SMYTH) Well, I'm sorry we haven't a pathologist here, but I don't think a pathologist would have much difficulty in answering that. The evidence is the appearance of the cells under the microscope and the pathologist can tell you very definitely whether you are dealing with tumor cells or with normal gastric cells.

Q. How does the age of the gastric ulcer patient effect your thinking with regard to resection?

DR. MORRISON: That is a very important question. Any person above the age of forty, certainly above fifty, who has a gastric ulcer and achlorhydria, I think should have definitive surgery. If a person is younger than forty, has gastric ulcer with achlorhydria I might actually feel the same way. It is said that any gastric ulcer that is associated with achlorhydria has a greater chance of being malignant than benignant. To leave such an ulcer in, is to increase the mortality figure. I am a firm believer in the importance of achlorhydria, especially in symptomatic older people and I do not accept much of this literature which says that gastric analysis and histamine achlorhydria are not important. I know there are outstanding personages, such men as Alvarez and many others, who say it is not worth doing a gastric analysis, but if we ever expect to have an easy way to decide on who should or should not be operated upon, we can take this as a rule: Achlorhydria in a person around fifty with a lesion in the stomach, whether it appears benign or not, should be operated upon.

DR. SMYTH: I wish there were time to discuss many other phases of this important subject, cancer of the stomach. There are several other questions which I think were answered in Dr. Morrison's remarks. Here is a final question.

Q. Is there a significant number of surviving patients with total gastrectomy who can be constituted as being comfortable?

DR. SMYTH: Well, if you hadn't put the significant in there, I would say there certainly are some patients with total gastrectomy who got along pretty well. The ones with total gastrectomy that I have done got along pretty well because they didn't prove to have cancer when the whole stomach was examined. I was guilty in my early years of doing total gastrectomy because there were a great many glands up along both curvatures, but on examination it proved to be nothing more than reactive lymph adenitis, but I repeat what I said in my paper, that I do not believe that any patient who has had a total gastrectomy can ever be considered a well person.

Dr. Rienhoff and Dr. Finney showed conclusively many years ago, that if you left even a very small bit of stomach, the way that those patients got along was in marked distinction to those who had the stomach removed and continuity restored by anastomosing the esophagus to the jejunum. We are beginning now to understand a little more as to why that is so, but that is another subject and too much to go into tonight.

Now, there are no more questions here. I know I speak for the entire panel when I say we appreciate your courteous attention, your turning out on a particularly vile night. It is getting better, I understand, as the hours go on, and Dr. Koontz left and said the meeting would be turned back to him, but he has departed to save a life, so I'll ask Dr. Ward to close the meeting.

CLOSING REMARKS BY DR. G. E. WARD: Dr. Smyth, Dr. Rienhoff, Dr. Morrison, on behalf of the Baltimore City Medical Society, I want to thank you for a very interesting panel discussion. I am sure we have all received a good deal of benefit from this, and we thank you for coming all the way from the City of Brotherly Love, on a vile night too.

I want to say to the many men and women of the Baltimore City Medical Society, I appreciate the fact you have elected me as President for the coming year. I feel that I have some pretty big shoes to fill, following so many predecessors of eminence that have gone before me. I assure you I will do my best to follow in their footsteps.

The meeting is adjourned.

FOREIGN BODIES IN THE AIR AND FOOD PASSAGES

LESLIE E. DAUGHERTY, M.D.*

Suspected or known foreign bodies constitute about one-fourth of all reasons for endoscopy in the air and food passages, from the new-born to the aged.

Pins grasped from a mother's bosom while diapers are being changed to accidentally swallowing of dental prostheses, account for many cases. Often times just a wheeze after a supposed cold is the tell tale sign, while at other times the x-ray shows a dislodged tooth or bead in the small bronchii on routine examination.

The senior Chevalier Jackson once said "all that wheezes is not asthma." Yet, asthmatic-like attacks with near drowning of the lung after aspirating a "beard of wheat" or other vegetable foreign matter is quite common.

Foreign bodies should be suspected in hemoptysis in the young and certainly otherwise unaccountable lung hemorrhage deserves a bronchoscopy. Pins and screws have been known to lie dormant for years in the lungs, but not so in the food passages.

Ingested foreign bodies invariably make known their presence by pain on swallowing, or may even prevent swallowing. When one is unable to swallow his own saliva there is total obstruction and most invariably at the cricopharyngeal pinch-cock in the region of the suprasternal notch.

Nearly always, the victim attempts or is urged to attempt to swallow dry bread or other solid matter, to force passage of a suspected foreign body, or even inserts his fingers down his throat in an attempt to cause vomiting. All of which only serves to lodge it more firmly, or worse yet to embarrass respiration, because the trachea and esophagus have a "common party wall." With the exception of a pork bone in the esophagus, all foreign bodies are well tolerated until a careful diagnosis can be made under favorable circumstances in a well organized endoscopic clinic.

Foreign bodies in the air and food passages are never an emergency, unless or until respiration is embarrassed and then a tracheotomy may be indicated and not an endoscopy, and certainly not immediately. All contingencies must be reckoned with and any and all instruments must be at hand for successful removal with safety. Certainly no blind attempt with any instrument should be instituted, because the esophagus is easily ruptured and mediastinitis will surely supervene and a fatality arise in all too many cases.

What then should be the procedure to follow? First of all, calmness and sound judgment, on the part of the patient, his friends, and even the physician; particularly the latter are in order. No one should be struck on the back of the head or chest, or held up by the heels to dislodge the object. Should it be dislodged from the esophagus, it might suddenly be aspirated into the lungs or lodged in the larynx, only to cause immediate asphyxia.

Abstain from swallowing anything, liquids or solids. Go immediately to a hospital equipped with personnel and instruments. Seldom is any clinic at a loss for instruments (in spite of newspaper accounts) but it may be and often is at a loss for trained personnel. Those entrusted to endoscpoy, are or should be highly skilled and well trained for such delicate work (he ought to have a natural aptitude). Seldom, if ever is it necessary to work in the night and never until thorough and competent x-ray analysis is made. Teamwork is not only desired but necessary and at least four hours should elapse after ingestion

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of food before one is subjected to surgery. It is true the patient is frightened and sometimes his physician is most concerned and anxious, but to make haste is to make waste. A well organized endoscopy is a major undertaking and demands the same sterile setup as all major surgery.

Obstructions in the larynx and trachea are quite apart from obstructions in the main stem or smaller bronchii. Not much time can be lost in the former, because asphyxia quickly supervenes and death or near death may have already occurred. Tracheotomy is the first procedure (sterile if possible) but anyway and with only a knife and a hairpin if need be. Only one precaution is necessary. Make the skin incision from the bottom of the larynx at the cricoid ring to the sternum but cut only the third and fourth rings of the trachea. The greater the necessity, the less need for anesthesia and certainly never a general anesthetic. Procaine is used in an orderly procedure in the hospital in adults and children, and certainly no anesthetic in an extreme emergency. General anesthesia (inhalation or intravenous) will surely kill the already asphyxiated patient. Normal endoscopy can now be done or later as indicated, with a bronchoscope under standard hospital setup.

Occasionally a foreign body lodged in the throat will cause asphyxia. If possible, get an immediate airway. Expose the larynx and insert any semi-stiff catheter. If a laryngoscope is handy, use it. It is a life saver and belongs in every physician's kit or office table and certainly no anesthetist should ever be without it in the operating room. Battery handle lighted, it is always ready, but if unfortunately none is handy—just slide the index finger over the base of tongue and hook the tip over the epiglottis, one quick sweep laterally and any foreign body may be brushed aside or grasped.

There being no asphyxia, the foreign body if swallowed, is most likely within the grasp of the crico-pharyngeous pinchcock, just behind the suprasternal notch at the level of the third cervical vertebrae. The next anatomical narrowing is at the level of the arch of the aorta and lastly another anatomical narrowing at the cardia. Most foreign bodies reaching the cardia sooner or later pass into the stomach, but even a temporary delay at anyone of these locations is indication for endoscopic removal.

Summarizing: A quick look into the fauces and palpation by the surgeon is in order. No foreign body being seen or felt, then a tracheotomy, if asphyxia is present. There being no asphyxia, the patient should be immediately transported to the hospital where fluoroscopy and x-rays are made. The first for quick diagnosis and the second for a permanent record, because objects may shift position.

No sedation of any kind is given.

From thereon the endoscopist takes complete charge and determines the procedure to follow. A negative x-ray, especially of non-opaque foreign bodies, does not determine the presence or absence of foreign bodies or pathology. This means a look-see especially in the presence of symptoms, such as pain, dysphagia, lump in the throat, etc.

Barium is never given as a first procedure in x-ray diagnosis, because it complicates and delays any endoscopy from four to seven hours. In longer-standing cases where plenty of time is available, barium may be used with considerable help.

Lastly: Endoscopy (broncho-esophagoscopy) is never an emergency, unless or until embarrassment of respiration supervenes. It is done early in the day like any other major surgical procedure, when the surgeon is fresh and rested and all his trained personnel have conferred and all the instruments likely to be needed in this particular case are at hand.

It is true the modern bronchoscopic clinic is like a fire station, but there is no place for untrained hands. Teamwork is the keyword.

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THE RESPONSIBILITIES OF THE MEDICAL PROFESSION IN THE USE OF X-RAYS AND OTHER IONIZING RADIATION

Statement by the United Nations Scientific Committee on the Effects of Atomic Radiation

(The following editorial comment by Dr. Nicholson J. Eastman appeared in the June 1957 issue of the Obstetrical & Gynecological Survey, *and is hereby reproduced with the permission of the author and the publishers, The Williams & Wilkins Company. This republication is made at the request of the Obstetric Section of the Maternal and Child Welfare Committee of the Medical and Chirurgical Faculty. The Committee feels that the subject matter is of such vital importance that every possible method should be used to bring it to the attention of all physicians in the State.)*

(The subject matter of this report has to do with one of the most grave and pressing problems in modern obstetrics and gynecology. The question is "Does the present-day use of x-ray pelvimetry, placentography and salpingography, liberal as it is, jeopardize the normalcy of future generations?" As the months go by we are certain to be hearing more and more about this issue in the medical literature, from our radiologic colleagues, in the lay press, and (possibly above all) from our patients. It is high time accordingly that we take cognizance of its several aspects.

Congenital malformations are the cause of from 15 to 20 per cent of perinatal deaths. But these are just the malformations incompatible with extra-uterine life. In addition, an array of congenital defects are seen which, while compatible with extra-uterine existence, conduce to early death (hydrocephalus, spina bifida) or handicap the infant in various ways (hare-lip, cleft palate, cardiac malformations, skeletal deformities, etc.) The latter group include minor malformations down to supernumerary digits and nevi, which may be so small as to be inconsequential. Because of this range, from the grave to the insignificant, of these congenital malformations compatible with extra-uterine existence, it is difficult to draw a borderline and enumerate all those of clinical significance; but various studies indicate that the total incidence of congenital malformations at birth (whether compatible or incompatible with extra-uterine existence) is greater than one per cent. Table 1, from a paper by R. C. Anderson and S. C. Reed, gives a figure of one in 65 births (Journal-Lancet (Minn.), 74: 175, 1954). This table has been reproduced in its entirety because the frequency of the various types of malformations and the risk figures for later siblings are questions which arise often in obstetrical practice.

But this is by no means the entire toll taken by congenital malformations, since a much greater number occur in association with spontaneous abortion and are presumably responsible for the majority of spontaneous abortions. In an analysis of 1,000 spontaneous abortions, Hertig noted pathologic ova ("blighted ova") in 48.9 per cent, embryos with localized anomalies in 3.2 per cent and placental abnormalities in 9.6 per cent of his cases (Ann. Surg., 117: 596, 1943). Although we know little about the causation of such abnormalities in human beings, reasoning from the results obtained in experimental teratology makes it probable that two main sets of factors are concerned: abnormalities in the earlier stage of segmentation of the ovum and changes in its environment. Pending more precise knowledge, abnormalities in the early stages of segmentation are attributed to defective germ plasm, which of course implies that the

TABLE 1

Risk figures for later siblings

	Incidence in Population		Risk Figures for Later Siblings	
All Malformations		1 in 65		1 in 20
Central nervous system malformations (35%)				
Anencephaly	1 in 450		1 in 50	
Spina bifida	1 in 375	1 in 200	1 in 25	1 in 22
Hydrocephalus	1 in 550		1 in 60	
Mongolism		1 in 600		1 in 20
Muscular-skeletal malformations (25%)				
Harelip with or without cleft palate		1 in 1,000		1 in 7
Cleft palate alone		1 in 2,500		1 in 7
Polydactylia		1 in 1,200		1 in 2
Syndactylia		1 in 2,000		1 in 2
Clubfoot		1 in 1,000		1 in 30
Malformed arms, hands		1 in 5,000		—
Achondroplasia		1 in 7,000		—
Congenital hip dislocation		1 in 1,500		1 in 20
Cardiovascular malformations (20%)				
All congenital hearts		1 in 150		1 in 50*
Patent ductus		1 in 2,500		1 in 50
Genitourinary malformations (6%)				
Hypospadias		1 in 1,000		1 in 50 (?)
Polycystic kidney (infant)		1 in 1,500		1 in 4
Gastrointestinal malformations (3%)				
Exomphalos		1 in 4,000		less than 1 in 100
Diaphragmatic hernia		1 in 10,000		—
Tracheo-esophageal fistula		1 in 6,000		less than 1 in 100
Atresia ani		1 in 5,000		less than 1 in 100
Multiple malformations (11%)				
Miscellaneous				
Pyloric stenosis		1 in 350		1 in 17

* For any type of heart defect to recur.

defect may originate in the germ cells of the mother or father or of both.

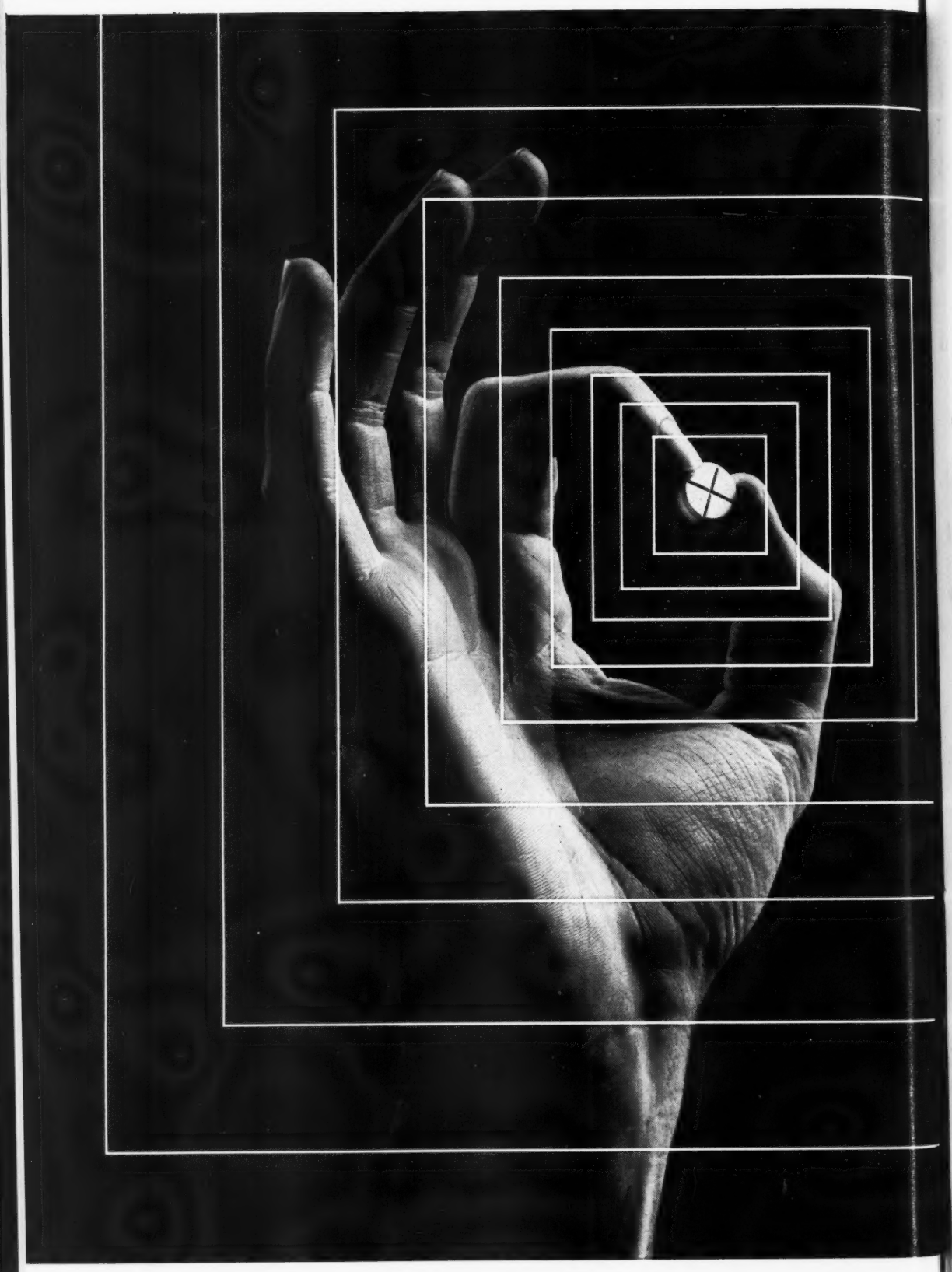
The most conclusive evidence in favor of defective germ plasm is afforded by the occurrence of double ovum twins, in which one vesicle contains a normal and the other a rudimentary embryo. In such cases, the abnormality cannot be attributed to a defect in implantation or environment as both ova were implanted on the same decidua. In most cases, however, the evidence is more inferential and is based upon the condition of the embryo as contrasted with the rest of the product of conception. In this way Streeter concluded that defective germ plasm was the essential cause for 81 out of the 104 abortions reported by Huntington (Am. J. Obst. & Gynec. 17: 32, 1929). The recognition of the effect of abnormal germ plasm is simpler than explaining its exact mechanism. The causes can be divided into two main groups, those arising from defective chromosomes and genes, and those arising from faults in intra-uterine environment. Both these factors are based on theory and analogy and they cannot be demonstrated in human ova by the microscope or the test tube.

The question of primary importance is: What causes abnormal chromosomes and genes? Unfortunately, a categorical answer cannot be given. Probably everyone carries a certain number of abnormal genes in each of his gametes, defects transmitted through heredity, passed

directly from remote ancestors through immediate progenitors. And when, by ill chance, in the process of fertilization the defective genes of the sperm are matched by identical defective genes in an ovum, the genetic character presided over by these genes is made defective. If at fertilization the defective genes of one gamete are matched by normal genes in the gamete of the opposite sex, then the character involved usually, but not always, appears normal.

All the genes that a person starts with, when the original egg cell is fertilized, are in general kept unchanged as the cells divide and the person's body is elaborated and maintained. The process by which the dividing cells duplicate the genes may not always produce perfect copies but it does so in general. Nevertheless, the genes do occasionally change. They are changed by certain agents, notably by heat, by some chemicals, and by *radiation*. It is with the last of these three agents of gene change that we are concerned in the present issue. When a gene becomes permanently altered we say it *mutates*. The gene in its altered form is then duplicated in each subsequent cell division. If the muted gene is an ordinary body cell, then it is merely passed along to other body cells; and we are not concerned with this type of muted gene in the present discussion although it is established that certain malignancies, such as leukemia and certain other cellular abnormalities, can be induced in this manner. The type of muted gene which is important for our present purposes is the one which exists in a sperm or an egg cell as a result of mutation having occurred either in that cell or in an earlier cell stage. In this case, a child resulting from this sperm or egg will inherit the muted gene and pass it on to endless generations. The change is presumably an alteration in the complicated chemical nature of the gene and the energy furnished by the radiation is what produces the chemical change. Mutation ordinarily affects each gene independently; and once changed, an altered gene then persists from generation to generation in its new or muted form. Moreover, the muted genes, in the vast majority of cases, and in all the species so far studied, lead to some kind of harmful effect. In extreme cases the harmful effect is death itself or loss of ability to produce offspring, or some other serious abnormality. But the changed character, due to the mutated genes, seldom appears fully expressed in the first generation of offspring of the person who received the radiation and thus had one of the genes mutated. For these mutated genes are usually recessive. If a child gets from one parent a muted gene, but from the other parent a normal gene belonging to that pair, then the normal gene, as we have already stated, is very likely to be at least partially dominant, so that the normal characteristic will appear. But this is not all of the story. Even when paired with a normal and dominant gene, that is to say, even when in the heterozygous state, they still have some detrimental effect. This "heterozygous damage" is ordinarily much smaller than the full expression of the muted gene when in the homozygous state; and yet, there may be a significant shortening of the life or reduction of fertility of the heterozygous carriers of the mutation. And the risk of heterozygous damage applies to many more individuals,—indeed to every single descendant who receives the gene (for fuller discussion of the genetic effects of radiation, see the Report of the Committee on Genetic Effects of Atomic Radiation, Am. J. Human Genet. 8: 207, 1956; the foregoing statements on mutation are based on that report).

The fact that radiation by x-rays can cause harmful mutation in germ cells is attested by a vast amount of work by geneticists beginning with the Nobel Prize work of Muller and extending to the exhaustive studies on the mouse currently being carried out at Oak Ridge by the Russells (almost any recent volume of the journal *Genetics* contains one or more articles by these workers). It is true that experimental results obtained from one species, especially quantita-



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tive results, are not necessarily applicable to another species. Nevertheless, there are certain general qualitative results that have now been so widely confirmed that we may confidently assert that these apply to all higher organisms. These results, as stated by Sturtevant in his presidential address at the Pacific Division of the American Association for the Advancement of Science (Science, 120: 405, 1954), are:

1. High energy irradiation, including x-rays, produces mutations.

2. The frequency of induced mutation is directly proportional to the dosage of the irradiation. There is almost certainly no threshold value below which irradiation is ineffective.

3. The effects of successive exposures are accumulative.

4. The effects are permanent in the descendants of the affected genes. There is no recovery.

5. The overwhelming majority of these mutations is deleterious—that is, they seriously effect the efficiency of individuals in later generations in which they come to expression. These deleterious genetic effects may lead to early death or to any of a wide variety of defects, often gross ones.

As we have indicated, there is a store of such undesirable genes already present in our population. What irradiation does is to add to this store. It should be stressed especially that the dosage of x-rays reaching the reproductive cells is accumulative and that spacing is of no avail. Thus, if a fetus in utero receives one roentgen unit to its gonads from x-ray pelvimetry, another roentgen unit from x-ray placentography, eight roentgen units from birth to the age of 30 from natural sources and medical x-rays, and then sires or mothers a child at 30, the genes will suffer to whatever extent 10 roentgen units can cause damage. In regard to irradiation from natural sources, it has been estimated that the radiation which the average person receives from cosmic rays, naturally occurring radium, etc. approximates on the average a total accumulated dose of about 4.3 roentgenograms over a 30 year period. The Committee on Genetic Effects of Atomic Radiation has recommended that the general public of the United States be protected, by whatever controls may be necessary, from receiving a total reproductive lifetime dose (conception to age 30) of more than 10 roentgens of man-made radiation to the reproductive cells. This allowance is over and above the three to four roentgens which the average person receives over the course of 30 years from natural sources. But the Committee takes pains to point out that while they regard this allowance of 10 roentgens as "reasonable" they do not regard it as "harmless." As an illustration of this fact they cite the following example. Suppose the whole population of the United States received a very small dose of man-made radiation, say one roentgen unit. Then, they state, there is good reason to think that, among 100,000,000 children born to these exposed parents, there would be several thousand who would be definitely handicapped because of the mutated genes due to the radiation, and this statement, mind you, is based on a single medical irradiation of only one roentgen unit, which is about the amount used for x-ray pelvimetry.

As already stated, the preceding paragraphs of this note have drawn heavily on the Report of the Committee on the Genetic Effects of Atomic Radiation. We will now turn to another recent publication for documentation, namely, the monograph entitled, "The Biologic Effects of Atomic Radiation: Gonadal Dose from the Medical Use of X-Rays" by J. S. Laughlin and I. Pullman, published under the auspices of the National Academy of Sciences and the National Research Council. This 103 page document, containing 38 tables, gives extensive and authoritative information on the gonadal doses of x-ray exerted by every type of radiological procedure and gives extensive data on x-rays as employed in obstetrics and gynecology.

This monograph recalls that x-ray examination of women in pregnancy produces double effect by irradiating both mother and child. The

genetic effect on the mother will be on her succeeding children and this fact must be taken into account in the statistics. The genetic effect on the fetus will have to be added to the genetic effects of any other irradiation the individual receives before sireing or mothering an offspring. The basic data for estimating the frequency of obstetrical x-ray examinations were supplied by Dr. Schuyler Kohl, who has been collecting obstetrical data on IBM punch cards for several years from about 10 hospitals, mostly in the New York City area but some from other parts of the country, such as Denver, Baltimore and New Haven. Average values over the last three or four years for the frequency of various types of obstetrical examinations, of which the most important is pelvimetry, are listed in Table 2. Since most of these hospitals are teaching institutions, some of which have been conducting research on x-ray pelvimetry, there is every reason to believe that the percentages cited are much higher than obtains for the country at large.

In regard to gonadal dosage from x-ray pelvimetry, the normal dose given to the female gonads of the mother appears to be 0.7 roentgens. Haas and his associates at the University of Michigan measured 0.5 to 0.7 roentgens received by the fetal gonads in a three film examination (Surg., Gynec. & Obst. 99: 462, 1954). On the other hand, other technics give a much higher dosage, the maximum dose reported being seven roentgens by Moloy and Swenson ("The Use of the Roentgen Ray in Obstetrics," Chapter in Vol. II of Diagnostic Radiology, edited by R. Golden, 1945). The highest doses occur in the male fetal gonads when in the breech presentation, with the gonads pressed toward the outside. The minimal dose received by the fetal gonads in placentography and a flat plate of the abdomen is estimated in this monograph as 0.2 roentgens; but the authors believe that the minimal doses cited for pelvimetry, placentography and a flat plate of the abdomen are decidely *lower* than the average dose received by the fetal gonads in most such examinations.

TABLE 2

Frequency of obstetrical x-ray examination (Kohl)

	Primipara Patients	Multipara Patients	Over-all Average
Number of Patients	26,894	51,947	78,841
Percentage of Patients			
Pelvimetry examinations given (3 films average each)	23.3%	5.25%	11.4%
Placentography (1 film)	0.44%	0.64%	0.57%
Abdomen (1 film)	2.6%	3.75%	3.4%
Chest	48.3%	47%	47.4%

In the light of the foregoing observations the following conclusions would seem to be justifiable.

1. The total number of congenital malformations which accrue in the United States each year, including those in abortuses, is probably of the order of a quarter of a million. This figure is based on 4,000,000 births annually, about 400,000 spontaneous abortions, a 50 per cent incidence of congenital malformations associated with spontaneous abortion and an incidence of congenital malformations in viable births of a little over one per cent. This represents a huge fetal loss and it would be reprehensible indeed if any measure which obstetricians deliberately employed would serve in time to increase this wastage.

2. X-rays, even in small doses, are known to produce mutations in the gonadal germ cells and these mutations are certain, in the opinion of the best geneticists, to produce congenital malformations and other incapacities in future generations. How frequent this result will ensue is not known for human beings, but there is general agreement among geneticists that *some* harm will be done.

3. Every effort should be made to curtail x-ray pelvimetry and placentography to the lowest limit compatible with the safe management of labor and delivery.

Now, many of us have been ardent supporters

of x-ray pelvimetry, even routine x-ray pelvimetry, for many years and these allegations are a rather bitter pill to swallow. Can we not say something in rebuttal? Yes, we can; but rather weakly, I fear.

In the first place, there is no *proof* whatsoever that the harmful genetic effects described apply to the human. Moreover, there can be no proof, one way or the other, for a hundred years or so. All the charges against radiation in pregnancy are based on the genetic behavior of plants, the fruit fly and the mouse. Is it not possible that human genes behave differently? Extremely unlikely, say the best geneticists. They point out that the chemical nature of hereditary material is universally the same; that the main pattern of hereditary transmission of traits is the same for all forms of life reproducing sexually; and that the nature of the effects of high-energy radiations upon the genetic material is likewise the same in principle.

In the second place, it can be maintained in rebuttal that the experience in Hiroshima affords no evidence to confirm the harmful effects of irradiation on subsequent generations. Despite the fact that over 80,000 pregnancies in Hiroshima and Nagasaki were followed, the data are inconclusive. The most recent analysis shows no statistically significant evidence of a genetic effect, as might be shown by increased stillbirths and abnormalities or changes in the sex ratio. On the other hand, it should be emphasized that genetic defects induced by the bombs would be spread over many generations and would be manifest in many ways, so that only a small fraction of the total effect would occur in a single generation and be of such a nature as to be detected in this study. Another point to be made is that only a small fraction of the births studied were from heavily irradiated parents; most came from areas away from the explosion centers. Therefore, the inconclusive results are not surprising. If mutations in man were occurring at the rates found in mice, the effects could probably not have been detected by this study. About the only conclusion is the negative but hopeful one that human germ cells are not grossly more susceptible to radiation than those of mice.

A third argument which might be made in rebuttal is that the families of radiologists reveal no conclusive evidence of harmful genetic sequelae of the excessive radiation often received over the years by members of this specialty. There are two published studies on the families of radiologists (Am. J. Roent. & Rad. Ther., 73: 442, 1955; ibid. 73: 467, 1955). Both were by questionnaire and compared radiologists with control groups, mainly pathologists, thought to be comparable in respects other than radiation exposure. In the latter study there was no significant difference between the miscarriage, stillbirth or childhood death rates in the two groups. The former study showed a slight but statistically significant increase in stillborn or abnormal children in the families of radiologists over the control series but one cannot exclude the possibility that the differences were due to hidden biases of the type likely to be found in any questionnaire study. These studies, accordingly, prove little or nothing, one way or the other.

All in all, the arguments which we can advance to rebut the charges of the geneticists are lamentably weak and it would seem obligatory to accept the generalization that *x-rays are genetically harmful*. How is this fact going to affect clinical practice in obstetrics and gynecology?

First, increased patient-resistance to all forms of radiation, at least in persons under 40 is certain to grow. No less than six letters have already reached my desk from expectant mothers whose obstetricians have recommended x-ray pelvimetry late in gestation and who are worried about the genetic harm that might be done. In one large teaching center in which most of the expectant mothers are well-read wives of faculty members or students, a 50 per cent refusal to submit to x-ray pelvimetry is being encountered although the procedure has been routine in that clinic for many years. Recently a feature article

appeared in the Baltimore Sun, by one of the staff writers, which stated unequivocally that whereas x-ray pictures of the pelvis used to be used extensively in pregnant women to measure the size of the birth canal, this practice is now "deplored"; and an increasing number of such articles for lay consumption will doubtless be appearing the country over.

Second, efforts are being made everywhere to employ faster x-ray films and to employ appropriate screening so that the dosage of x-rays to the maternal and fetal gonads will be reduced to the lowest possible amount. There can be no question about the importance and urgency of steps in this direction.

Third, *routine* x-ray pelvimetry will probably become a thing of the past although some readers may take issue with this statement. Since x-ray pelvimetry may do *some* harm to the genes of the mother and/or fetus (and it seems impossible to contradict that statement), I do not see how any conscientious obstetrician can continue to use x-ray pelvimetry *routinely* in gravid women. It has long been my opinion, frequently expressed in print, that x-ray pelvimetry is a valuable *adjunct* in the management of labor but by no means essential in all cases. In cases in which there is reason to suspect pelvic contraction on clinical grounds, the advantages of x-ray pelvimetry may well outweigh its possible genetic harm; and can certainly be used with a clear conscience in such instances. But, as I said, it seems to me, in view of all the evidence, that *routine* x-ray pelvimetry is on its last legs. Since placentography requires much less dosage and since it is employed in outright hemorrhagic complications, its use will doubtless continue and rightly so. The dosage used in salpingograms and pyelograms appears to be variable but in some reports is very high. As for therapeutic doses to the ovaries in the treatment of sterility, the usual dosage approximates 200 roentgen units and in view of the comments made above, the inference would appear to be too obvious to require elaboration.

Few problems in obstetrics and gynecology carry with them such grave and far reaching implications as this one. Do we, or do we not, have an obligation to posterity? What is our duty? Let us hope that these questions will be answered wisely.—Ed.)

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THE PSYCHIATRIC CARE OF THE MENTALLY RETARDED CHILD IN MARYLAND*

DAVID WIES, M.D.

As we psychiatrists sat atop the McLean Hospital hill at Waverly, Massachusetts, and looked across to the famed pioneer Walter G. Fernald School in Waltham, I doubt that any of us thought of the "children" there as being candidates for psychotherapy. We retired to our cubby holes, engrossed in the enigma of schizophrenia. We knew, of course, that at Wrentham School Dr. Clemens Benda was carrying on brilliant researches in mongolism (was it the pituitary?) and that one out of five-hundred was born with that affliction, placid and lovable, destined for early death. Somehow, too, on another hill in Towson, Maryland, I read of Dr. Harry Stack Sullivan and his basic studies in interpersonal relations in anxiety, but here, too, at Sheppard-Pratt Hospital, schizophrenia was

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the prima donna. Rather more common ailments were relegated to the stockpile.

So, too, in Baltimore, at the child psychiatric clinics, we took a quick glance at the retarded child and his parents, the latter having lost most of their courage and money to disprove the reality of the "shame" of the child. We salved our consciences by doing a quick Binet-Simon, and if the child's IQ was 69, we made a diagnosis of "high-grade moron," placed him in an "opportunity class" in public school and spent a session or two in getting the parents to "accept" their child's status quo. But somehow or other the parents didn't "accept," and around six years ago organized the Maryland Association for the Mentally Retarded Child, and began to work on their problems and those of their children, pulling the psychiatrists, pediatricians, public health workers, social workers and educators *after* them.

Having been initiated into the team-work of an O.P.D. orthopsychiatric clinic, I joined the staff of the only residential treatment center for emotionally disturbed children in Maryland, the Child Study Center of Maryland. But here again the ways of the O.P.D. were not widely applicable to the child-resident. The work of the special teacher, the house-parent, the social worker was as fully important as that of the psychiatrist, and we were all again in a learning process, with no one in town to teach us, and so we learned the hard way. The Child Study Center was a Community Fund organization, yet I quickly learned that it served "white children of normal intelligence." Naturally, the negro parent didn't even apply at the Child Study Center. There was still segregation, although negro parents contributed to the Community Fund, and the transfer of children from Crownsville State Hospital to Rosewood had not yet begun. But again the emotionally disturbed "feeble-minded" child was not admitted. We accepted only children of "better prognosis." On a rare occasion a child of "borderline intelligence" slipped through our barriers, and we found to our surprise that he was malleable. However, we as psychiatrists and our cohorts (especially the social workers) had been imbued with the concept of "intellectual insight," even though we were well aware of the fact that many who passed through the wringer of a "classical psychoanalysis" and were teeming with Freudian self-understanding, were little changed.

In 1944, the Unmet Needs Committee of the Baltimore Council of Social Agencies studied the incapacity of the State to meet the unfulfilled social-psychological needs of a few dozen children in the city and environs. Among these were quite a few children whose IQ's varied between 50 and 80, with no place to turn. It has never been quite settled as to what a "retarded child" was. In some states the IQ limit is 80, but in Maryland the limit is 70. In recent years, the State Department of Education (by dint of a State law) awards $600.00 for the special care of a physically or mentally handicapped child, for whom the State system of public education cannot adequately care. But woe to that child (and his impoverished parents) whose IQ is over the brink, IQ—70! Yet, ten years ago that money was not available; Maryland now is far ahead of many states in its special provisions for the handicapped child.

About seven or eight years ago a few teachers visited the Child Study Center. Some of them were the mothers themselves of retarded children. They knew the heartaches, and had been to Chicago to study under Bernadette Schmidt, a renowned educator, who was medicating her pupils with glutamic acid, then reportedly raising IQ's 20 or 30 points. Unfortunately, her results were later proven invalid, and the hearts of those parents of 2 million school children, who had heard of the "miracle drug," fell. Yet, somehow there still is a feeling that the amino-acids, so vital to the cerebral nuclei, will in some way, in one of its derivatives, multiply the IQ. And who knows? After all, there is a phenylpyruvic oligophrenia, and an Rh factor oligophrenia. Next year Rosewood State Training School will start some research on phenylalanine metabo-

lism. Just as important, those aforementioned mothers started a tiny special school for retarded children in the vestry of a church. ("The School of the Chimes" five years ago took over an old estate in Mt. Washington.) Around this core began a movement of hundreds of parents, with state-wide branches of a National Association for Retarded Children. (Three per cent of the general population is "retarded;" more than 4 per cent of men were rejected by the Selective Service for retardation; 7 per cent of school children are estimated by the American Society for Mental Deficiency to be mentally handicapped; even one in ten have been thought to be deficient at birth.†) This movement is one of the most dynamic I have seen, its drive motivated by the frustrations of years in getting something done for their children, and to relieve their daily guilt and shame and reactive hostility to society for making theirs "the forgotten child." They have built "The Searchlight Training Center" in West Arlington, Baltimore, for the "trainable child," for those not "educable" in public or private schools. Negro or white afflicted with mongolism or cerebral palsy or epilepsy or speech defect or hard of sight or hearing, as well as the associated mental handicap is accepted. Later, funds were raised for another similar edifice in the Dundalk-Essex area. The St. Francis parochial school, several small private schools, and in the last year the Erdman Avenue School (a public school) for "trainable" children joined in the effort. Every conceivable social and recreational outlet was supplied: scout troops, day camps, overnight camps, Sunday School classes, swimming pool instruction, teen-age recreation centers. And attempts were made in private industry to find "Sheltered Workshops." The last year's financial drive enabled the Society to employ a part-time psychiatric social worker to work with the parents. And in the foreground is a planned special diagnostic clinic for the retarded child, when funds are raised. There are a few such clinics in the city of New York, and as can be imagined, the waiting lists are a year or two long.

But apart from such social-educational resources, what can be done for those many retarded children whose psychogenic problems loom large? It has been estimated that at Rosewood at least 25 per cent of the children suffer from severe emotional problems. (1). Neuroses or psychoses, (2). reactive disturbances to social-economic situations, with "acting out" in the community, so that often the public, including the medical and legal professions, believe without much evidence that the retarded ones are more "criminal" than their "wiser" confreres. In 1951, I accepted gingerly my first private retarded patient, enrolled at the School of the Chimes, as a candidate for psychotherapy. A ten year old daughter of an artist, compulsive in character formation, suffering from a dirt phobia and a near delusion that she would become the wife of the President of the United States. She couldn't touch clay (the logical product to use in the playroom to work out "anal" problems), but she could talk and had a sense of humor. In addition, I learned what I confirmed numerous times since, that the retarded child, frustrated as he is by his incapacities, by society and his ambivalent parents, forms quickly an intense relationship with his therapist. He is avid for every drop and crumb of love he receives, is anxious for help, talks out, acts out, plays out, reports his day dreams and nocturnal dreams like all others, and even (to some degree) can develop intellectual insight. Further, there is often a discrepancy between (in IQ tests) "performance" and "verbal' subtests. In the "common garden-variety" of retarded children, the performance tests are often higher than the verbal tests, and give signs of effectiveness as in people of average intelligence. The retarded child could put the child psychiatrist to shame as they worked together on clay, and this could foretell happily of the child's eventual absorption into the semi-skilled working community. But

† Levinson, Abraham, M.D.—"The Mentally Retarded Child," pp. 54–55.

what of the child with obsessional personality and the dirt phobia? Certainly she was no candidate for a "classical psychoanalysis." Yet, gradually her aggression was relaxed (her surroundings were her uncomfortable targets), her neurotic conscience became less rigid (over a period of 2½ years) and she was finally able to associate with objects and playmates. Her IQ increased as her preoccupied mantle was pierced; she worked well on a weaving-loom, her dreams revealed a weakly covered "oedipal" situation (and as I discovered was openly acted out on a brother until I "put the mother wise"). Her reading reached the 6th grade level, and the State Department of Education wanted her to go to a public school (and so save the State $600.00 a year!). I found out, to my satisfaction, that at least *some* markedly retarded children could be treated psychiatrically as well as their more intellectually gigantic brethren!

So when a few of my colleagues and I, from 1953 on, were asked to be teacher-consultants to the doctors (five out of six were not trained psychiatrists) at Rosewood State Training School, under the aegis of the Mental Health Department, it was with some trepidation. Could the clinical psychologists and the general practitioners be taught the ways of a psychiatrist, adapted for the use of retarded children? The doctors at Rosewood nearly overwhelmed by work, medical and administrative, realized the large need for psychotherapy among the children and worked feelingly, helping many who did not actually belong at Rosewood. Were these schizoids and autistics, pseudo-retarded, many of these? And there were many delinquent teenagers in open and pre-parole buildings. One of my colleagues now held group-psychotherapeutic sessions. Results seemed favorable but await ultimate evaluation. Here was a sub-clinic under the Department of Public Welfare for the psychiatric study of children to be admitted to Rosewood or to special foster-homes. Over yonder the foundation of a building for emotionally disturbed children, to be gathered from widespread corners, including children unfortunately housed at Spring Grove State Hospital (or at home). There was a spirit of fermentation at Rosewood, but where was adequately trained staff to be obtained? And what of the new Federal funds assigned for research in mental deficiency? (More money than the present administration asked for!) Also, the urgent task of prevention—what of prenatal clinics, and well-baby clinics, and public health doctoring and nursing? These are all collaborative goals for the future. Complicated tasks though they are, I believe they have some chance of eventual solution, because the parents of unfortunates are goading the professional groups to action.

ARTICLE OF INTEREST

THE WORLD MEDICAL ASSOCIATION: BASTION OF FREEDOM IN MEDICINE

AMOS R. KOONTZ, M.D.*

The House of Delegates of the American Medical Association has several times urged that all members of the A.M.A. join the World Medical Association. The last time such action was taken was at the meeting of the House of Delegates on June 5, 1957. They declared that it was difficult to believe that any physician in the United States was not a member of the W.M.A. They further declared that further participation by American doctors would be necessary if the American viewpoint was to be continually and effectively presented in the World Medical Association, and through it before other international bodies, to protect the interest and aims of medicine. The House further recommended that all State associations be urged to give full support to the officials of the W.M.A. in order to achieve the objectives of that association.

At a recent meeting of the Council of the Medical and Chirurgical Faculty of the State of Maryland a resolution was adopted urging all members of the Faculty to join the W.M.A. The Council also determined to take further action in urging the officials of the component societies to conduct an active campaign to increase the membership of the W.M.A.

Why have these two sensible hardheaded national and state societies (the A.M.A. and our own State society) taken such action? The answer is not far to seek, and should be known to every well informed participant in organized medicine. Yet it is as lamentable as it is amazing that few doctors know anything at all about the work of the W.M.A. It can be succinctly put as follows:

The W.M.A. is the only international organization which stands for the principle of private practice, the theory and practice of private enterprise, and the dignity of the individual.

* Chairman for Maryland, U. S. Committee of the World Medical Association.

The W.M.A. is the only organization through which the American doctor can have his interests protected in its contact with other world organizations concerned with health or medical care, such as the World Health Organization (W.H.O.) of the United Nations, the International Labor Organization (I.L.O.), the International Social Security Association (I.S.S.A.), and the International Committee of the Red Cross.

It is highly important for us to have contacts with these organizations because at least one of them, the I.L.O., is a completely socialistic organization and has repeatedly tried by international agreements to foist socialized medicine upon the entire world.

The W.M.A. has defended the rights of the medical profession against attempts by various nonmedical organizations to draft a code of international medical law. Were such a code adopted medical control would be taken away from doctors and put into the hands of lay groups.

American physicians are singularly fortunate in having met their social and economic problems by voluntary action, turning back the threat of political domination. Our favored position only emphasizes our responsibility to lead the fight to preserve the principles of good medical practice for our colleagues abroad, and to help them restore these principles whenever they have been compromised.

Furthermore, the W.M.A. endeavors to enhance better international understanding among doctors by all sorts of means, such as the international exchange of medical students and teachers, the promotion of a freer flow of proven therapeutic agents throughout the world by urging the removal of unwarranted trade restrictions and arbitrary licensing requirements in certain countries, and by conducting useful studies on many subjects of worldwide interest to physicians.

Besides, the W.M.A. has formulated plans for a central repository of medical credentials, which in this strifetorn world would make it possible for doctors who have had to flee their countries and leave all their records behind to show that they were doctors and also to show what their qualifications were.

During the recent rape of Hungary, 500 Hungarian physicians were deported to Siberia, according to press reports, because they were guilty of the humanitarian act of taking care of rebel wounded. Many other Hungarian doctors had to flee from their country into Western countries in order to save their lives. The action of the W.M.A. in this crisis was in marked contrast to the feeble, futile, fumbling actions of our government. The W.M.A. naturally could not rescue the Hungarian doctors who were sent to Siberia. It did, however, protest to the United Nations and did ask the aid of the International Red Cross. It also sent money for the relief of refugee physicians fleeing to the West and urged the medical associations of various countries to do the same. The responses were numerous and generous.

Fifty-three countries (none of them Iron Curtain countries) have membership in the W.M.A. It can be safely said that membership in organized medicine is not complete without membership in this fine organization. An application blank will be found on the next page of this issue of the *Journal*. You may become a member by simply filling out the blank and sending it, with a check for $10 to the indicated address.

The objection is often raised that there are too many things to belong to, and too many dues to pay. I know of a youngster who very laudibly wanted to work last summer in order to make money to send himself back to college. Before he could even start to work, he had to pay a union $15. Our dues in our various societies are still voluntary. Is it not worthwhile to support societies which are trying to keep us on a voluntary, rather than a compulsory, basis? Freedom is not static—to be preserved it constantly has to be fought for.

1014 St. Paul Street
Baltimore 2, Maryland

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Application for Membership

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I desire to apply for individual

ACTIVE . . . . . ☐ $ 10 per year
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Please make check payable to: THE WORLD MEDICAL ASSOCIATION, UNITED STATES COMMITTEE, INC. *and return with this form to 10 Columbus Circle, New York 19, New York.*

NOTE: *Applicant is requested to complete the form below:*

Name (please print) ..... *Degree* .....

Address.....
No. Street City County State

I am a member of the.....*County Medical Society: Yes* ☐ *No* ☐
County

My Specialty is: General Practice ☐ *Public Health* ☐ *Pediatrics* ☐ *Internal Medicine* ☐

Obstetrics-Gynecology ☐ *General Surgery* ☐ *Industrial Medicine* ☐ *Other*.....

I would be willing: (please check, if "yes")

(a) To give lectures or participate in formal scientific programs abroad, under WMA auspices ☐

(b) To act as host to foreign physicians visiting my section of the U. S. A. ☐

(c) To take an active part in efforts to promote membership in the U. S. Committee among colleagues in my county medical society ☐

Date..... *Signed*.....

MEDICAL and CHIRURGICAL FACULTY

Annual Meeting

APRIL 16, 17, and 18, 1958

THE ALCAZAR, BALTIMORE

Component Medical Societies

ALLEGANY-GARRETT COUNTY MEDICAL SOCIETY

LESLIE E. DAUGHERTY, M.D.
Journal Representative

Dr. Pincoffs Addresses Physicians

Forty-five doctors, mostly with their wives, attended the annual Garrett County meeting of the Allegany-Garrett County Medical Society in October.

The high light of the occasion was the speaker, Dr. Maurice C. Pincoffs. Born in Chicago, a graduate in medicine at the Johns Hopkins University, he is now Emeritus professor of Medicine at the University of Maryland and editor of the *Annals of Internal Medicine*, the official monthly publication of the American College of Physicians.

Fig. 1. Drs. E. I. Baumgartner, Chairman-Entertainment Committee; Maurice C. Pincoffs, speaker; B. Skitarelic, Pres. Allegany-Garrett County Medical Society.

His persuasive manner, kindly expressive features, and his ability to hold the attention of his audience, caused a quietness during his talk that you could have heard a pin drop. Taking a subject, most features of which are universally known, he brought forth new enthusiasm and a determination of his audience to slow down, listen to the patient's full description of the onset and course of his disease.

Like Osler, when he recounted the case histories of arrested hypertension; whether it was Cushing's Disease, adrenal tumor or another disease, a picture was indelibly placed upon the listener's mind that almost never could be replaced.

Dr. and Mrs. Pincoffs were the house guests of Dr. and Mrs. E. Irving Baumgartner, while in Oakland and were presented with a winter supply of Garrett County maple syrup.

In talking to his many former students, he recounted the beautiful scenes while passing through Allegany and Garrett forests and lake country. What a beautiful setting for a future Semi-Annual Meeting of the Faculty; good golfing, good boating and good food.

I think that I shall never see
A poem lovely as a tree
A tree whose hungry mouth is prest
Against the earth's sweet flowing breast
A tree that looks at God all day
And lifts her leafy arms to pray

A tree that may in summer wear
A nest of robins in her hair
Upon whose bosom snow has lain
Who intimately lives with rain
Poems are made by fools like me
But only God can make a tree.—*Joyce Kilmer*

Personals

Dr. Carlton Brinsfield, prominent surgeon of Cumberland, gave an illustrated talk to the Allegany County Branch of the American Cancer Society during a regional meeting in October, in Midland, Maryland. Dr. Brinsfield dealt with the psychology of fear, its prevention and treatment.

Cumberland physicians attending the panel discussion on Coronary Disease, held in October by the Baltimore City Medical Society were; Drs. William Alfred Van Ormer, William F. Williams, Benedict Skitarelic, G. Overton Himmelwright. Participants on the panel discussion were: Dr

Dwight E. Harken, Associate Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts and Colonel Thomas W. Mattingly, M.D., Chief, Cardiology Service, Walter Reed Army Hospital, Washington, D. C.

Captain Richard J. Williams, Cumberland, USN Medical Reserve Corps, attended a three-day symposium at the U. S. Naval Hospital, Portsmouth, Virginia, in October.

* * *

O wad some Power the giftie gie us,
To see oursels as ithers see us!
It wad frae mony a blunder free us
an' foolish notion—*Robert Burns*

Dr. Feddis Opens Office in Cumberland

Dr. Robert Feddis, native of Dublin, Ireland, has opened an office at 39 Greene Street, in Cumberland, for the practice of Orthopedic surgery.

Dr. Feddis graduated from Dublin Medical School in 1949 and served as house surgeon for six months at Mater Hospital in Dublin. He came to the United States in March, 1950 and served a rotating internship at Holy Name Hospital, Teaneck, New Jersey and a year of general surgery at Sitkin, Neptune, New Jersey. In July, 1952, he was an orthopedic resident at Bellevue Hospital, N. Y. for one year and following that, he served two and a half years active duty in the U. S. Army Medical Corp in Germany and Italy. Upon his return, he continued his residency at the New York Bellevue Medical Center, until June 1957. Dr. Feddis is married and has one child.

BALTIMORE CITY MEDICAL SOCIETY

CONRAD ACTON, M.D.
Journal Correspondent

Ninety persons heard a panel discussion on "Coronary Disease" at the first Baltimore City Medical Society meeting of the current season on Friday, October 4, 1957. Moderator E. Cowles Andrus, M.D., Associate Professor of Medicine at Johns Hopkins and Past President of the American Heart Association, introduced the two panel participants: Dwight E. Harken, M.D., Associate Professor of Surgery at Harvard Medical School and Colonel T. W. Mattingly M.C., Chief of the Cardiology Service, Walter Reed Army Hospital.

Doctor Andrus set the background for the panel by briefly reviewing vascular conditions of the heart musculature and defined, for the Panel's purposes, coronary disease as "Ischemic Heart Disease." He limited the panel to concern itself with two aspects; 1) How to sustain the coronary reserve after an infarct: and 2) How to relieve the complications and consequences of coronary ischemia.

Colonel Mattingly first urged us to consider the natural history of coronary disease and the number of patients whose coronary problem was overlaid by a large umbrella of anxiety. He felt that the anxiety overlay needs reassurance, particularly urging an explanation of the tidal aspects of angina to forestall a great deal of worry and discomfort on the part of the patient. He described the "Pentagon Syndrome" as he had seen it develop in officers under high tension, from a small coronary, to a complete insult, and fatal termination and speculated that with adequate reassurance the salvage rate might be increased.

Colonel Mattingly noted angina is often relieved when infarction occurs and, upon healing of the infarct, individuals could be free of pain until the next one. With regard to the newer surgical approaches, he preferred to "wait and see" how more adventurous surgical attempts to solve the problem come out.

He spoke compellingly about certain overtreatments to which those on the medical side were prone. He felt that slow acting vasodilators were continued much too long in many instances.

The shoulder-hand syndrome, he felt, was not a true complication of angina, but rather due to the inactivity of the part because of the pain referred there. He said that in his patients it had never occurred because use of the arm and joints was insisted upon.

Doctor Harken spoke feelingly of the occasion, some four or five years ago, when his second scheduled appearance before this Society had been prevented by a snowstorm that stopped him in New York City. He told of trying later to collect the unused New York City-Baltimore part of his fare. His attempts at collection brought him contact with a high official of the airline. On learning of his many,

annual air hours, he was made an "Admiral-of-the-Fleet," with due ceremony. But he did not collect the refund.

The man from Boston then made a point of attacking certain cliches grown up in our thinking about coronary disease surgery. Particularly debunking the idea that a "warning signal" is lost when the pain is gone. He denied that warning was lost. The warning signal is changed from pain to a sense of fullness and pressure which is just as effective. Later on he said that having extreme angina to warn of the ischemia was "like having an air raid siren on your front porch," effective but too loud and unnecessarily disturbing.

Professor Harken pointed to the confusion that seems to exist in many discussions of coronary disease. Circulation in the myocardium being one thing and pain being another, though combined and used interchangeably by many workers in this field. Pain and circulation often are related but not necessarily identical in significance. As he went on in his discussion, he continued to point out the distinction between circulation through the myocardium and the pain of ischemic heart disease.

He described results in 43 patients upon whom he had performed phenol de-epicardialization, his favorite method for producing collateral circulation. In these patients there had been a fifty per cent freedom from symptoms and approximately seventy-five per cent return to gainful employment. Then he spoke of the increased flow through the myocardium that had been demonstrated to occur following his procedure. After his talk, a beautiful movie of the actual operative steps showed phenolization of the epicardium and introduction of a "lappet" of lung through slits in the pericardium so that it would form firm anastomoses.

Internal mammary ligation has intruded itself on the scene with no experimental backing or rational justification as far as he could see. He has done it on twenty patients and, in the twenty patients, again seventy-five per cent were sufficiently improved to return to work. In one of them, under local anesthesia, traction upon the proximal end of the artery resulted in "that same pain" radiating into the left arm.

The meeting was then open for discussion. First question was about "controls." Doctor Harken described the system in Boston where patients sent to him are carefully screened by four eminent cardiologists. He did not feel that the study of alternate controls under this method of screening was justified. He estimated that it would take approximately fourteen years to accomplish any sort of series, should he operate on alternate cases.

Doctor Blalock spoke of experiments on the effect of internal mammary ligation in the dog. He quoted his associate Dr. Sabiston, as showing that mammary ligation was no protection against the effects of occlusion of a coronary vessel in the experimental animal and caused no increase in the flow through the myocardium. To this Doctor Harken replied that the *circulation through* the myocardium and *pain in* the myocardium were not necessarily the same thing, as he had earlier emphasized. Doctor Blalock stated unequivocally that "internal mammary ligation is a *phony*." He went on, however, to remark that at Dr. Harkens' inability to be present at the previous Baltimore City Society Meeting, he, Dr. Blalock, had substituted for him. Dr. Harkens politely replied that that occasion had "undoubtedly been my best speech in Baltimore."

Thirty members remained to conduct the business session. This had to do largely with the first reading of the proposed changes in the constitution to be acted upon at our next meeting. Several other matters of a business nature were mentioned and were returned to the Executive Board for disposition.

Dr. Blalock rose to inquire about the paucity of scientific meetings of this Society, stating that not long ago there were two a month. President Geraghty explained the present arrangement. So many other meetings demand our time, sectional meetings are held almost once a month, hospital compulsory attendance at staff meetings, committee meetings, etc. The members of the Executive Board thought, that if Society business was carried on at scientific sessions, out-of-town speaker-visitors could be exposed to a display of parliamentary tactics which were not of interest to them; sometimes also not very edifying. For these reasons, two of the monthly scientific sessions, in the constitutional amendments, are being taken away so that the Annual and Semi-annual meetings henceforth could be entirely devoted to business affairs. Dr. Blalock expressed his opinion that without more scientific meetings the "younger" men would lose interest in the Society.

Dr. Geraghty introduced guests from Allegany-Garrett County Medical Society: Dr. Benedict

Skitarelic, President; Doctors William A. Van Ormer and William F. Williams, delegates; and Dr. George O. Himmelwright, member. We are glad to have such a full representation from our fellow Component Society to enjoy an evening with us.

The Woman's Auxiliary represented by Mrs. Whitmer B. Firor, President, and Mrs. Raymond V. Rangle, served a pleasant collation of coffee, hot chocolate, donuts, and coffee cakes to the very evidently gratified members at the end of the meeting.

BALTIMORE COUNTY MEDICAL ASSOCIATION

SAMUEL P. SCALIA, M.D.

Journal Representative

The Stafford Hotel in Baltimore City was the scene of the September luncheon meeting of the Baltimore County Medical Association.

It was announced that Dr. Albert E. Goldstein had been appointed Counselor to the County Medical Society by the Medical and Chirurgical Faculty.

Mr. James Pollard, an insurance advisor, gave a short talk on the development of Group Malpractice Liability Insurance. Such a plan has been evolved for the Baltimore City Medical Society and for several of the County Societies. Rates have increased about 40 per cent for physicians and about 60 per cent for surgeons during the past year. By means of this proposed group plan, rates will be considerably lower. Further news of this innovation will be forthcoming.

The Asian flu was discussed by the Society and the Health Department. The County Health Department suggests the use of a priority list for the administration of the vaccine, especially since the vaccine is not easily available. Various members of the Association felt that the Public Health Service had aroused hysteria with its almost daily reports in the public press. Medical news items should be released through medical channels as in the past, instead of directly to the newspapers. Some lively discussion was centered on the safety of the vaccine and its release to physicians. It was finally resolved that no priority list would be used in the County; that distribution of the vaccine would be through the normal channels of supply and that the Public Health Service should be criticized for its unwarranted publicity regarding Asian flu.

Through the courtesy of the U. S. Vitamin Corporation, a film on Peripheral Vascular Diseases was shown at the conclusion of the business section.

FREDERICK COUNTY MEDICAL SOCIETY

LOUIS R. SCHOOLMAN

Journal Representative

The September meeting was held in the new Victorian Dining Room of the Peter Pan Inn at Urbana. The family style vegetables with the expected corn fritters were excellent, as usual, and the steaks were unusually thick, juicy and tender. The speaker of the evening, Dr. Henry T. Bohnson, associate professor of Surgery at the Johns Hopkins Hospital, gave a most interesting talk on Surgical Treatment of Diseases of the Aorta.

At the September C.P.C. an unusual case of adenocarcinoma of the stomach on a 74 year old white woman was presented. She had undergone surgery twice for intestinal obstruction but, because of the neoplastic adhesions present, the underlying pathology, in spite of biopsies at each laparotomy, was not diagnosed. Dr. Furie, pathologist, then briefly discussed carcinoma of the stomach in relation to incidence and prognosis with and without subtotal gastrectomy.

WASHINGTON COUNTY MEDICAL SOCIETY

HOWARD N. WEEKS

Journal Representative

At the business meeting of the Medical Staff of the Washington County Hospital the following physicians were elected to office for the year 1957–1958:

President and Chief of Staff: Dr. J. G. Warden; Vice President: Dr. O. D. Sprecher; Secretary: Dr. George Jennings; Assistant Secretary: Dr. D. J. Boyer; Members of Executive-Advisory Committee: Dr. E. F. Poole; Dr. R. VL. Campbell.

The meeting was held September 26, 1957.

Necrology*

J. Hubert Wade, M.D.
1872–1957

Dr. J. Hubert Wade, aged 84 years, dean of county Medical practitioners and for years one of Maryland's top Democratic Party political leaders, died at the Washington County Hospital, Saturday morning at 3:40 o'clock of pneumonia, after an illness of five weeks.

Born in Boonsboro, he was the son of the late Eli and Frances Harper Wade.

Dr. Wade had practiced medicine up until his recent fatal illness for a period of 62 years. He had received his doctorate in medicine from the Baltimore Medical College in 1895.

Dr. Wade was one of the old-fashioned family doctors and had a large practice throughout the Boonsboro section and the large area along South Mountain. Even after he reached 80 years of age, he seemed to be busier than ever in his practice, and also found time to dabble in politics.

As a young country doctor, he started out driving a buggy in the summertime and usually riding horseback in the winter, or whenever the roads were bad. He maintained a fine Kentucky saddle horse for that purpose.

Dr. Wade was old-fashioned only in the sense that he believed in manifesting a genuine interest in his patients and their families, listening to their troubles and advising if and when asked. He was also old-fashioned in his unbusinesslike manner of charging and collecting for his services. He never hounded a patient for payment of a bill and many of his accounts went unpaid. Many patients, however, paid up their back bills, many years after they were contracted, as better times smiled on them.

Dr. Wade, who had been interested in State Democratic politics all of his adult life, was a former state senator from Washington county. He also served not only as chairman of the Democratic State Central Committee for Washington County but also as chairman of the state-wide Democratic Central Committee for a number of years.

At one time Dr. Wade, as head of the State Democratic Central Committee, played a major role in state as well as national politics. He served on the State Prison Board, the Parole Board, the Conservation Commission and the State Tax Commission and numerous other state organizations. He was a serious student of politics and like most family physicians who learned to know their people, he wielded a power all of his life in the politics of his own county.

He was unerring in his predictions of the outcome of elections, not only state but national as well. He was a delegate to the National Convention that chose Woodrow Wilson as the Democratic standard-bearer, and saw him elected President. He also was one of two delegates who started the boom to nominate Franklin D. Roosevelt and saw him elected President four times. He helped organize one of the first FDR-for-President clubs in the nation, in Baltimore City.

Prominent for many years in the civic life of his own community, as well as the entire county, he was president of the Board of Directors of the Boonsboro Bank for the past 25 years.

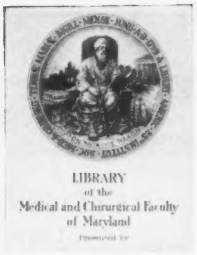
He is survived by one niece and a nephew.

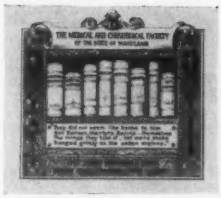
Funeral rites were held with services at his late home in Boonsboro, the Rev. William Groff officiating. Entombment was in the Boonsboro Mausoleum. In lieu of flowers, it was requested that donations be made to the building fund of the Washington County Hospital.

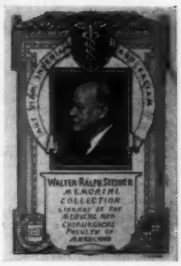
Honorary pallbearers were members of the Washington County Medical Society, while acting pallbearers were directors of the Boonsboro Bank.

HOWARD N. WEEKS, M.D.

* A. S. Chalfant, M.D., *Chairman.*







Library

Louise D. C. King *Librarian*

"Books shall be thy companions; bookcases and shelves,
thy pleasure-nooks and gardens." *Ibn Tibbon*

HISTORY OF MEDICINE

LOUISE D. C. KING

Librarian

Too often we hear the younger men say they have no time for HISTORY OF MEDICINE. It is thought of as a subject left to those who have a strange passion for delving into the past or to the leisure which comes with retirement.

You who have not yet taken the American Board, how well equipped are you to answer the questions about the development of your chosen field? Are you able to write a resumé of the historical milestones in your specialty? Can you give dates and names of those whose outstanding contributions have made your specialty what it is today?

If you practice obstetrics, do you really know your facts about puerperal fever? If you are a surgeon, what led up to and what names with their dates should be connected with the introduction of anesthesia? Who was responsible for bedside teaching, and who was one of the founders of bacteriology whose name is known in every kitchen?

One must not neglect the acquiring of at least a smattering of culture in the attainment of any education, and the foundation on which the art of medicine rests should be a part of the background of every physician and surgeon.

The Library will be glad to assist you in your collateral reading if you will let us know what phase particularly interests you or should you be preparing to take your American Board, do let us send you material which will give you a bird's-eye view of your specialty. The phenomenal strides made in medicine in general and in some fields in particular in the last decade, necessitates the reading of journal articles to bring yourself up to date in the various fields. The list below is for the older literature, and is suggested as a start:

SUBJECTS ARE THOSE OF THE AMERICAN BOARDS

ANESTHESIOLOGY

Duncum, B. M.—Development of inhalation anaesthesia . . . Lond. 1947

Keys, T. E.—History of surgical anesthesia. N. Y., 1945

DERMATOLOGY AND SYPHILOLOGY

Pussey, W. A.—History of dermatology. Springfield, Ill. 1933

Shelly, W. B., ed.—Classics in clinical dermatology. Springfield, Ill. 1953

INTERNAL MEDICINE

Major, R. H.—History of medicine. Springfield, Ill. 1954 2v.

Robinson, Victor—Story of medicine. N. Y., 1931

Rolleston, Sir Hunphy—Internal medicine. N. Y. 1930

NEUROLOGICAL SURGERY

Sachs, E.—History and development of neurological surgery. N. Y., 1952

Walker, A. E.—History of neurological surgery. Balt. 1951

OBSTETRICS AND GYNECOLOGY

Findley, Palmer—Priests of Lucina; the story of obstetrics. Balt. 1939

Jameson, E. M.—Gynecology and obstetrics. N. Y., 1936

Thoms, Herbert—Classical contributions to obstetrics and gynecology. Balt. 1935

OPHTHALMOLOGY

Chance, Burton—Ophthalmology. N. Y., 1939

ORTHOPEDIC SURGERY

Bick, E. M.—Source book of orthopedics. Balt. 1937

Osgood, R. B.—Evolution of orthopedic surgery. St. Louis, 1925

OTOLARYNGOLOGY

Wright, Jonathan—History of laryngology and rhinology. Phil. 1914

PATHOLOGY

Krumbhaar, E. B.—Pathology. N. Y., 1937

Long, E. R.—History of pathology. Balt. 1928

PEDIATRICS

Ruhräh, John—Pediatrics of the past. N. Y., 1925

Still, Sir G. F.—History of pediatrics. Lond. 1931

PHYSICAL MEDICINE AND REHABILITATION

Coulter, J. S.—Physical therapy. N. Y., 1931

PLASTIC SURGERY

Maltz, Maxwell—Evolution of plastic surgery. N. Y., 1946

PREVENTIVE MEDICINE

Newsholme, Sir Arthur—Evolution of preventive medicine. Balt. 1927

Winslow, C. E. A.—Conquest of epidemic disease. Princeton, N. J., 1943

PROCTOLOGY

Hill, T. C.—Why proctology has been made a specialty. In PROCTOLOGIST 10: 129–133, 1916

PSYCHIATRY AND NEUROLOGY

Lewis, N. D. C.—Short history of psychiatric achievement. N. Y., 1941

Wechsler, I. S.—Textbook of clinical neurology with an introduction to the history of neurology. Phil. 1952

Whitwell, J. R.—Historical notes on psychiatry. Lond. 1936

RADIOLOGY

Brown, Percy—American martyrs to science. Springfield, Ill. 1936

Christie, A. C.—The American Roentgen Ray Society; a historical sketch. American journal of roentgenology 76: 1–6, Jl. 1956

SURGERY

Flack, I. H.—The story of surgery. N. Y., 1939

Leonardo, R. A.—History of surgery. N. Y., 1943

THORACIC SURGERY

Rienhoff, W. F.—Twenty-five years' progress. American Surgeon 21: 653–662 Jl. 1955

UROLOGY

American Urological Society—History of urology. Balt. 1933

All of the above subjects are covered in a little book edited by Louis H. Bauer called "75 years of Medical Progress, 1878–1953," Phil. 1954. Garrison's "Introduction to the history of medicine"; 4th ed. Phil. 1929, is a source book, very complete to 1929.

Health Departments

BALTIMORE CITY HEALTH DEPARTMENT

Prenatal Interviewing Service

In 1954 the City Health Department inaugurated its prenatal interviewing service for expectant mothers who were not under medical care and who had made no arrangements for hospitalization at the time of delivery.

Dr. George H. Davis, the Health Department's Clinical Director of Maternal Health, has reported that for the period January 1 to October 31, 1957, a total of 6,169 expectant mothers have taken advantage of this service which is conducted at the Calvert Street Clinic. Interviews in 1956 totaled 5,766 and in 1955 numbered 4,880. It is estimated that by the end of 1957 more than 7,000 patients, or approximately one out of every three of Baltimore's expectant mothers, will be served in this way by the City Health Department.

Among the good results of the service are: A greater community awareness of the benefits of early prenatal care, more and earlier prenatal care, a reduction in unregistered deliveries at local hospitals, fewer accident room deliveries, better utilization of maternity beds, the availability of beds for emergency hospitalization when needed and a reduction in the public expenditures for maternity service.

Huntington Williams, M.D.

Commissioner of Health

STATE OF MARYLAND DEPARTMENT OF HEALTH

MONTHLY COMMUNICABLE DISEASE REPORT

Case Reports Received during 4-week Period, November 1–29, 1957

	CHICKENPOX	DIPHTHERIA	GERMAN MEASLES	HEPATITIS, INFECT. AND SERUM	MEASLES	MENINGOCOCCAL INFECTIONS	MUMPS	POLIOMYELITIS, PARALYTIC	POLIOMYELITIS, NON-PARALYTIC	ROCKY MT. SPOTTED FEVER	STREP. SORE THROAT INCL. SCARLET FEVER	TYPHOID FEVER	WHOOPING COUGH	TUBERCULOSIS, RESPIRATORY	SYPHILIS, PRIMARY AND SECONDARY	GONORRHEA	OTHER DISEASES	DEATHS: Influenza and pneumonia
Total, 4 weeks																		
Local areas																		
Baltimore County	8	—	4	—	7	—	5	—	—	—	6	—	—	13	—	1	m-1	8
Anne Arundel	1	—	—	—	—	—	—	—	—	—	3	—	—	3	—	1	—	6
Howard	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Harford	2	—	—	—	—	—	2	—	—	—	—	—	—	3	1	—	—	3
Carroll	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
Frederick	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1	—	4
Washington	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	5
Allegany	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Garrett	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Montgomery	7	—	2	—	13	1	2	2	—	—	21	—	—	8	—	1	e-1	5
Prince George's	4	—	—	—	—	—	—	2	1	—	1	—	—	8	1	—	m-1	3
Calvert	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Charles	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	m-1	3
Saint Mary's	—	—	—	—	—	—	—	1	—	—	1	—	1	—	—	—	—	1
Cecil	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	3
Kent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Queen Anne's	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caroline	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	2
Talbot	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	2
Dorchester	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	3
Wicomico	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	3	—	3
Worcester	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Somerset	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total, Counties	23	0	6	0	20	1	9	6	3	0	34	1	1	45	2	11		69
Baltimore City	19	0	7	2	396	4	11	0	0	0	12	0	6	78	17	449	—	65
State																		
Nov. 1–29, 1957	42	0	13	2	416	5	20	6	3	0	46	1	7	123	19	460		134
Same period 1956	90	0	18	2	14	2	99	8	2	0	12	0	17	113	19	539		52
5-year median	149	1	11	18	54	3	59	22		0	42	1	37	151	18	490		51
Cumulative totals																		
State																		
Year 1957 to date	1980	3	263	95	1579	33	2012	27	6	20	862	9	353	1572	235	6359		715
Same period 1956	2623	2	1119	88	9276	46	2805	81	18	15	712	15	135	1808	251	6515		617
5-year median	3243	13	547	285	6042	42	1920	265		28	1345	19	344	1915	206	6958		565

e = encephalitis-influenzal.

m = meningitis, other than meningococcal.

52 confirmed cases of Asian influenza reported.

Blue Cross - Blue Shield

A BLUE SHIELD PROBLEM

By Denwood N. Kelly*

Here at Blue Shield we constantly receive comments of all sorts from subscribers, doctors, hospital personnel, labor unions; in fact, from all kinds of sources. Some of these comments are critical and they worry us, so we try to remedy any weakness they point out. Every now and then we receive one which is congratulatory in nature; that makes us feel very good. Others really fall into still another category, but are posers because they point out some problem as yet unsolved; they may deal with a specific area of coverage or they may be concerned with the general problem of medical economics. If they fall into the latter category, we like to discuss them with you doctors as we know that you, too, are interested in them.

One which is coming up more and more often, both here in Maryland and in other sections of the country, can be very serious, both to the medical profession and to Blue Shield. It involves the criticism that there is a tendency on the part of some physicians to take the position that enrollment in Blue Shield (or the purchase of another type surgical-medical insurance) increases the patient's ability to pay and, therefore, warrants a higher charge by the doctor. The fact is that the presence of Blue Shield or other insurance is not necessarily an indication of greater financial resources and, consequently, greater ability to pay. Most frequently the reverse is true; the person has availed himself of Blue Shield coverage because his resources are limited and through Blue Shield he can budget the cost of his more expensive and unpredictable medical care on the basis of small monthly payments. He cannot afford to pay out a substantial amount at one time and prefers to handle this type of expense on a monthly prepaid basis.

This problem is not one involving subscribers entitled to Blue Shield service benefits. It concerns the patient whose income is above the Blue Shield limits for such benefits, but who has been provident enough to try to provide a way in which his doctor can be paid promptly when the need arises. He should not be penalized for his providence.

This may seem like a relatively small matter, but, believe me, it is an important one. It has caused a considerable amount of dissatisfaction in some areas and complaints of this nature seem to be on the increase here in Maryland. Our own Insurance Commissioner has recently expressed his concern over this very problem through his Actuary, Mr. M. H. LeVita, who appeared before Maryland Blue Shield's Board of Trustees just a few weeks ago. He said that his office has received enough complaints from the public about this matter to warrant their concern and expressed the hope that physicians participating in Maryland Blue Shield would give serious consideration to the problem. With the new Blue Shield Plan B coming into the picture with its higher benefits, the Commissioner is particularly concerned about Blue Shield Plan A subscribers whose incomes are somewhat above the Plan A service benefit limit, but considerably below that of Plan B. Realizing that a substantial number of such subscribers may not be able to afford the more expensive Plan B, he feels that in such cases physicians might be well advised to scale their charges somewhere between the fees provided under the two Plans.

This whole matter is one which should be given serious consideration. Properly handled, it can have beneficial results to physicians and their patients, alike; improperly handled, it can provide yet another step toward socialization.

* Assistant Director-Maryland Medical Service, Inc.

Woman's Auxiliary Medical and Chirurgical Faculty

MRS. HOMER ULRIC TODD, SR., *Auxiliary Editor*

THE AUXILIARY NEEDS YOU; YOU NEED THE AUXILIARY*

MRS. HOMER ULRIC TODD, SENIOR

When you join the Auxiliary,

You will learn: How current issues affect the medical profession and about community health needs and the methods by which Auxiliary Members can interpret these problems to lay groups.

You will enjoy: Social contacts with other doctors' wives whose interests are similar to yours.

Who belongs? Wives, mothers, unmarried daughters and unmarried sisters of members in good standing, of the Medical and Chirurgical Faculty of Maryland are eligible. This also holds true for this same group in the cases of members of the Faculty who, at the time of their death, were in good standing.

How did it start? The beginning of the Woman's Auxiliary to the American Medical Association springs from roots deep in the soil of Texas. One day, at a reception given by a doctor's wife for wives of the members of the Southern Medical Association, Mrs. John O. McReynolds asked one of the guests how she liked Texas. The guest replied, "Very much indeed, I have lived here thirty years."

This was food for thought. Before the State Medical Association of Texas was to meet, Mrs. Reynolds called together the doctors' wives at her home and suggested that they form the Woman's Auxiliary to the Dallas County Medical Society. This was in May, 1915. Their original purpose they stated in a slogan, "Our husbands, our homes, our communities, our Country." In 1918, the Woman's Auxiliary to the Texas State Medical Society was formed.

This venture proved so successful that Mrs. Samuel Clark Red, of Houston, conceived the idea of a National Auxiliary, which was heartily approved by the American Medical Association. There are auxiliaries in Hawaii, Alaska, the District of Columbia, and in 48 states. 159,488 doctors are members of the American Medical Association, and 75,000 doctors' wives are members of the Auxiliary. To bring these figures closer together is one of the functions of our organization. According to these figures, we are just half an Auxiliary.

Maryland has a potential membership of 3000 doctors' wives.

Organization still remains one of our greatest challenges.

Be informed: Read all editorials and auxiliary pages of the State Bulletin and National Medical Journals. All Auxiliary publications, particularly the Bulletin, the official publication of the Woman's Auxiliary to the American Medical Association, should be carefully studied for pertinent information.

How an auxiliary functions: Under the guidance and direction of an Advisory Committee of the Medical Society at each level—National, State, and County.

With the work there are friendly social gatherings, stimulating meetings, and interesting projects, all of which help us to know each other better.

There is no more satisfying, challenging and stimulating avenue for the energies of a doctor's wife than to serve her husband and her husband's profession as an active auxiliary member!

Appreciate your privilege of being a doctor's wife. Others would enjoy what we sometimes regard as unimportant.

* Excerpts from the "Manual of Directions" which was compiled and published in 1950 by the Woman's Auxiliary to the Medical and Chirurgical Faculty.

STUDENT AID FUND

MRS. E. ELLSWORTH COOK, JR.†

The Woman's Auxiliary considers as one of its most important projects the Student Aid Fund.

† Chairman, Student Aid Fund, Woman's Auxiliary to the Baltimore City Medical Society.

This Fund has been in operation only two years, but has been directly responsible for one fourth year medical student to graduate and two others to continue studying until their graduation in June, 1958. In spite of the relative newness of this Committee, many years of working, learning from others, and planning have been necessary to bring it into being.

We began, several years ago, with a contribution from an anonymous benefactor to Mrs. Albert E. Goldstein, who was then President of the Auxiliary, for a loan or scholarship to a worthy student. The Auxiliary added to this from the proceeds of the "Evening in Paris" Med-Chi Ball and established what we hoped was to be a Nurses Scholarship to an accredited Baltimore Hospital. Strangely enough, we received not one request for this money! The succeeding President, Mrs. Thomas C. Webster, was requested by several hospital nursing administrators to change our Scholarship to The Nurses Loan Fund, feeling there was a great need for help for the nursing students who had undergone an emergency situation in their family—such as illness or death—which might force resignations. At that time, since our funds were limited, we restricted our rules to include only nursing students in need of help. However, as our money-making affairs grew in number and size the following year with Mrs. E. Roderick Shipley as our President, we voted to have our Nurses Loan Fund include medical students and medical technologists as well as nurses, and changed the name to read Student Aid Fund.

We owe an enormous debt of gratitude to Mr. Walter Kirkman, of the Faculty, for his valuable help in giving us advice in making our rules.

After much advice we have established our Fund as a loan, because we feel the students would rather keep their self-respect and pay back the money so that others to follow may be helped. Also numerically we feel we can help more students by this method of disbursement.

Our rules state that medical students, to be eligible, must be in the fourth year at either the University of Maryland School of Medicine, or the Johns Hopkins University School of Medicine, both Maryland Institutions. Nursing Students and Medical Technologists, to be eligible, must be second or third year students in accredited Baltimore Hospitals. We make no stipulation that the applicants be of any race, color, creed, sex, or geographical area. The applicant must fill out a detailed application containing information about his family, health, and educational background. We are much concerned about other debts he may have incurred and what arrangements he has made for the paying of these debts. The applicant must give us a letter of recommendation from the Dean of the Medical School he is attending, as well as three personal references, such as the religious advisor, professionl or business men who have known him personally for several years.

The Student Aid Committee is composed of seven members of the Executive Board of the Auxiliary, with the President, a member Ex-Officio. The Recruitment Chairman, Finance Chairman, President-elect, and immediate Past President, are traditionally included on the Committee. The Chairman of the Committee is selected by the President and then may choose the remainder of her Committee, picking members because of previous experience as well as interest.

After the Committee has received all the written references and application, an interview between three Committee members and the applicant is scheduled. Questions are asked, such as what outside help is available; position held during the summer or school year; if the wife or family contributes financial assistance; when the doctor intends to interne and later practice; what arrangements can be made to repay the loan, and any other pertinent data. We are careful to find out if the applicant has any charge accounts in Baltimore or has ever bought an article on installment, then contact the Credit Manager of the store involved. If no credit information is available, we write to the bank reference the student has given. We have called or written to the family doctor as well as the religious advisor. In an effort to be brief, we have explored every source of information as to character and finances available and then meet with the Committee to talk out the problem and actually accept or deny the loan on good faith. The decision of the Committee must be unanimous or the entire Executive Board of the Auxiliary (comprising 25 Officers and Committee Chairman) is called into session and the facts collected are presented and voted upon.

After the loan has been granted, the Chairman contacts the applicant and explains our terms. The loan is not to exceed $500 for medical students, $300 for nursing or students of medical technology.

It is to be repaid in full, interest free, by the end of five years from the date of graduation. We strongly recommend small monthly payments from graduation, feeling a small payment can best be spared and also believing in the necessity for creating the habit of regular payments. We explain that the Auxiliary must be the beneficiary of an insurance policy covering the amount of the loan, to be in our possession until the loan is paid in full at which time it reverts to the owner. We will attach the premium of the policy to the loan if the student wishes. Our funds for the Student Aid Fund come directly from the proceeds of the Med-Chi Ball and other money-making projects of the Auxiliary. The dues of the members are used solely to cover the expenses needed for the Auxiliary to function. A councilor from the Committee is appointed to keep in touch with the student after graduation and until the loan is repaid.

This year we have begun sending printed memorial cards to our members who have recently lost loved ones, so instead of flowers the Auxiliary makes a contribution to the Fund in their memory. These cards are also available for appreciation and honor.

The Executive Board has voted to include students in the Student Aid Fund who may need financial assistance to enroll in the course given by Dr. John K. Frost on Exfoliative Cytology.

In our limited experience so far, the above procedure has been entirely satisfactory, and we feel we have made good choices in candidates. Only time can tell!! However, we in the Auxiliary feel personally a tremendous sense of gratitude and humility in being directly able to help these young people and contribute in our small way to the honored ranks of the Medical profession.

STUDENT AID FUND COMMITTEE

Mrs. Whitmer B. Firor—President Ex-Officio
Mrs. Raymond L. Markley—President Elect
Mrs. Sullins G. Sullivan—Chairman, Recruitment
Mrs. E. Roderick Shipley—Chairman Finance, Past President
Mrs. Conrad B. Acton—Past President
Mrs. Albert E. Goldstein—Past President
Mrs. William B. Stone—2nd Vice President
Mrs. E. Ellsworth Cook, Jr.—Chairman, Past President

NOMINATING COMMITTEE
WOMAN'S AUXILIARY TO THE MEDICAL AND CHIRURGICAL FACULTY

(Nominations for 1958–1959)

Mrs. John G. Ball, *Chairman*, Montgomery County
Mrs. Conrad Acton, Baltimore City
Mrs. John C. Baier, Baltimore County
Mrs. Archie R. Cohne, Washington County
Mrs. A. Talbott Brice, Frederick County, Member-at-large

COMING MEETINGS

JANUARY 1958

BALTIMORE CITY MEDICAL SOCIETY

Friday, January 3, 1958 8:30 p.m. 1211 Cathedral Street

* * * * *

THE WOMEN'S MEDICAL SOCIETY OF MARYLAND

Thursday, January 2, 1958 6:30 p.m. Johns Hopkins Club

* * * * *

MARYLAND SOCIETY OF ANESTHESIOLOGISTS

Tuesday, January 7, 1958 8:00 p.m. 1211 Cathedral Street

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ORTHOPEDIC SECTION, B.C.M.S.

Monday, January 13, 1958 8:00 p.m. Childrens Hospital School

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PEDIATRIC SECTION, B.C.M.S.

Tuesday, January 14, 1958 8:30 p.m. 1211 Cathedral Street

* * * * *

OTOLARYNGOLOGICAL SECTION, B.C.M.S.

Tuesday, January 14, 1958 6:30 p.m. Johns Hopkins Club

* * * * *

COMMITTEE FOR THE STUDY OF PELVIC CANCER

Thursday, January 16, 1958 5:00 p.m. Women's Clinic, Johns Hopkins Hospital

* * * * *

OPHTHALMOLOGICAL SECTION, B.C.M.S.

Thursday, January 16, 1958 6:00 p.m. Johns Hopkins Club

(over)

RADIOLOGICAL SECTION, B.C.M.S.

Tuesday, January 21, 1958 5:30 p.m. Johns Hopkins Club

* * * * *

JOINT COMMITTEE ON MATERNAL MORTALITY, CITY HEALTH DEPT. AND B.C.M.S.

Thursday, January 23, 1958 4:00 p.m. 1211 Cathedral Street

* * * * *

All meetings are held in the Medical and Chirurgical Faculty Building, 1211 Cathedral Street, Baltimore, Maryland, unless otherwise designated.

WOMAN'S AUXILIARY TO THE BALTIMORE CITY MEDICAL SOCIETY

AN EVENING OF CHAMBER MUSIC

MARYLAND CASUALTY AUDITORIUM

Saturday, January 25, 1958, 8:30 p.m.

Tickets (per person)—$2.50 plus tax

Doctors and their wives are invited to attend a concert given by a quartet composed of first string musicians from the Baltimore Symphony Orchestra. This is a benefit performance for the Student Aid Fund which is a project of the Auxiliary.

COME,
BRING YOUR FRIENDS,
ENJOY THE MUSIC AND HELP A STUDENT IN A MEDICAL CAREER!

Official Publication of the
MEDICAL AND CHIRURGICAL FACULTY
OF THE STATE OF MARYLAND

Maryland
STATE MEDICAL JOURNAL

L. 6 NO. 12
ember, 1957

FOR PERSISTENT INFECTIONS
CHLOROMYCETIN®
COMBATS MOST CLINICALLY IMPORTANT PATHOGENS

Acquired resistance seldom imposes restrictions on antimicrobial therapy when CHLOROMYCETIN (chloramphenicol, Parke-Davis) is selected to combat gram-negative pathogens involving enteric and adjacent structures of the urinary tract. The acknowledged effectiveness with which CHLOROMYCETIN suppresses highly invasive staphylococci[1-9] extends to persistently pathogenic coliforms.[6,10-15] Experience with mixed groups of Proteus species, for example, "...shows chloramphenicol to be the drug of choice against these bacilli...."[15]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

REFERENCES:

(1) Petersdorf, R. G.; Bennett, I. L., Jr., & Rose, M. C.: *Bull. Johns Hopkins Hosp.* 100:1, 1957. (2) Yow, E. M.: *GP* 15:102, 1957. (3) Altemeier, W. A., in Welch, H., and Marti-Ibanez, F., ed.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 629. (4) Kempe, C. H.: *California Med.* 84:242, 1956. (5) Spink, W. W.: *Ann. New York Acad. Sc.* 65:175, 1956. (6) Rantz, L. A., & Rantz, H. H.: *Arch. Int. Med.* 97:694, 1956. (7) Wise, R. I.; Cranny, C., & Spink, W. W.: *Am. J. Med.* 20:176, 1956. (8) Smith, R. T.; Platou, E. S., & Good, R. A.: *Pediatrics* 17:549, 1956. (9) Royer, A.: Scientific Exhibit, 89th Ann. Conv. Canad. M. A., Quebec City, Quebec, June 11-15, 1956. (10) Bennett, I. L., Jr.: *West Virginia M. J.* 53:55, 1957. (11) Altemeier, W. A.: *Postgrad. Med.* 20:319, 1956. (12) Felix, N. S.: *Pediat. Clin. North America* 3:317, 1956. (13) Metzger, W. I., & Jenkins, C. J., Jr.: *Pediatrics* 18:929, 1956. (14) Woolington, S. S.; Adler, S. J., & Bower, A. G., in Welch, H., and Marti-Ibanez, F., ed.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 365. (15) Waisbren, B. A., & Strelitzer, C. L.: *Arch. Int. Med.* 99:744, 1957.

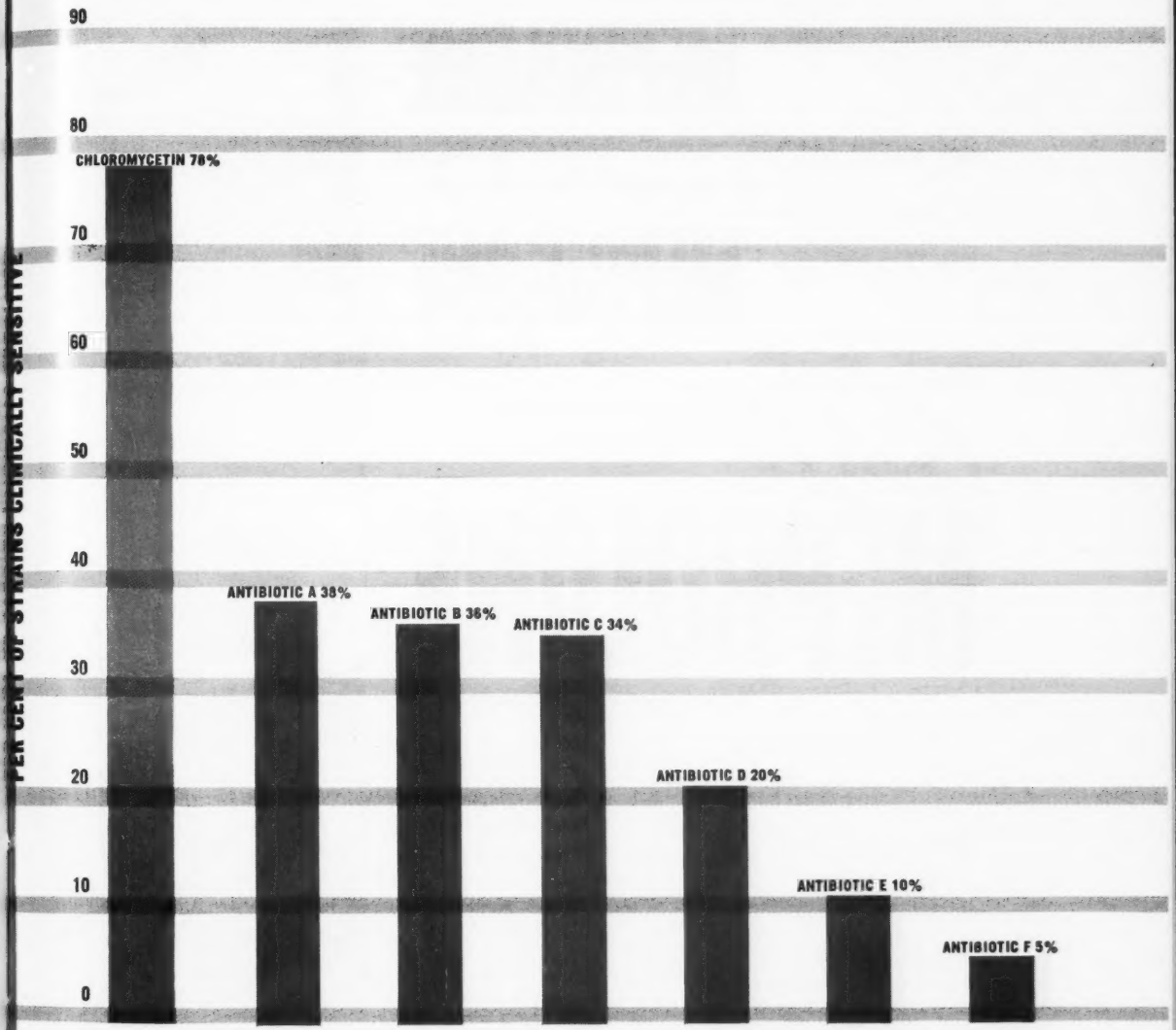
MEDICAMENTA VERA

PARKE, DAVIS & COMPANY · DETROIT 32, MICHIGAN

90188

PER CENT OF STRAINS CLINICALLY SENSITIVE

COMPARATIVE SENSITIVITY OF MIXED PROTEUS SPECIES TO CHLOROMYCETIN AND SIX OTHER WIDELY USED ANTIBIOTIC AGENTS*



*This graph is adapted from Waisbren and Strelitzer.[15] It represents *in vitro* data obtained with clinical material isolated between the years 1951 and 1956. Inhibitory concentrations, ranging from 3 to 25 mcg. per ml., were selected on the basis of usual clinical sensitivity.

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MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND

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VOLUME 6 | *December, 1957* | NUMBER 12

CONTENTS

"the value of analgesic and tranquilizing agents should be clearly recognized in the management of [angina]..."[1]

new for angina

PETN + ATARAX

PENTAERYTHRITOL TETRANITRATE

CARTRAX*

links freedom from anginal attacks with a shelter of tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inextricably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

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CARTRAX should be taken *before* meals, on a *continuous* dosage schedule. Use with caution in glaucoma.

1. Russek, H. I.: J. Am. Geriat. Soc. 4:877 (Sept.) 1956.

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disappointed with half measures in angina?

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(dihydroxy aluminum aminoacetate with belladonna alkaloids and phenobarbital)

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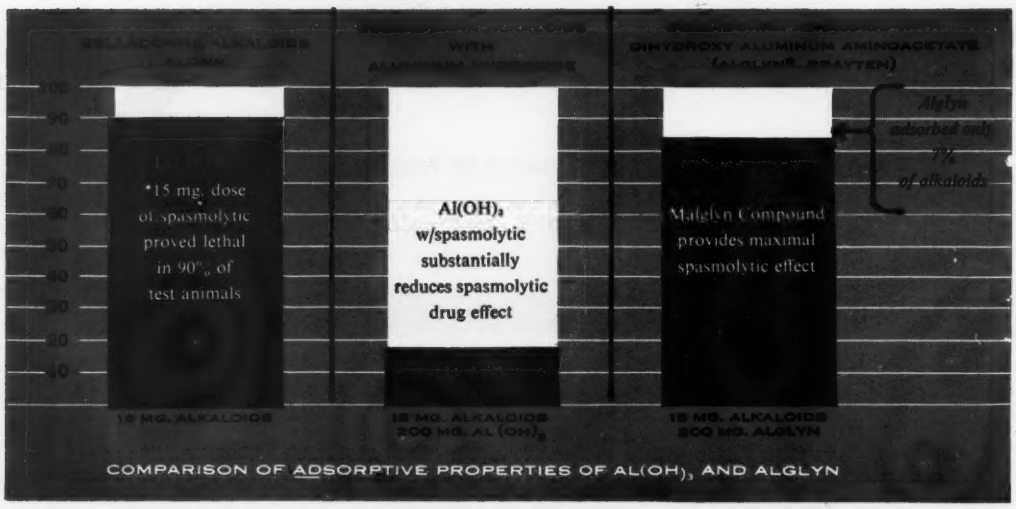

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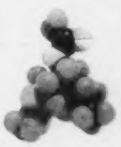

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Because it treats the *whole* menopausal syndrome.
Because *one* prescription manages *both* the psychic and somatic symptoms.

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A Proven Tranquilizer
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"Eighty-seven patients with various infections of the skin were treated over a period of six weeks with [Signemycin]. Excellent or good results were achieved in sixty-seven, including eleven of twenty-two patients refractory to other antibiotics."

Levis, H. H.; Frumess, G. M., and Heuschel, E. J.: Rocky Mountain M. J. 54:806 (Aug.) 1957.

"Results of treatment with oleandomycin-tetracycline of 50 infections [mostly respiratory] due to resistant organisms and 40 infections [respiratory, skin, urinary infections] due to sensitive organisms are very encouraging. In some of these patients, [Signemycin] was lifesaving, and in others surgery was made unnecessary. This confirms other reports."

Shubin, H.: Antibiotic Med. & Clin. Therapy 4:174 (March) 1957.

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Signemycin in 79 patients with severe soft tissue infections: "The average response of these cases was excellent and inflammatory symptoms subsided with almost uniform rapidity....The magnitude and incidence of surgical intervention was reduced....Side reactions were minimal. . . ."

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Five groups of patients (total 211) with acne were treated with one of five antibiotic agents, including Signemycin (55 cases). "The results were evaluated taking into consideration the usual response to such conservative conventional therapy and the rapidity of response." In 8 weeks, Signemycin rapidly attained and maintained the highest percentage of efficacy of antibiotic agents tried.

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Now buffered to produce higher, faster blood levels; specify the V form on your prescriptions.

Supply: SIGNEMYCIN V Capsules, 250 mg. Signemycin Capsules, 250 mg. and 100 mg. Signemycin for Oral Suspension, 1.5 Gm., 125 mg. per 5 cc. teaspoonful, mint flavor. Signemycin Intravenous, 500 mg. vials and 250 mg. vials, buffered with ascorbic acid.

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Brooklyn 6, N. Y.

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World leader in antibiotic development and production

"Eighty-seven patients with various infections of the skin were treated over a period of six weeks with [Signemycin]. Excellent or good results were achieved in sixty-seven, including eleven of twenty-two patients refractory to other antibiotics."

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an oxazine . . . not an amphetamine
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PRELUDIN®
(brand of phenmetrazine hydrochloride)
developed specifically
for appetite suppression
Chemically different from the amphetamines, PRELUDIN provides potent appetite suppression with little or no central stimulation.
• rarely causes loss of sleep[1] — may be given late enough in the day to curtail after-dinner "nibbling," yet not hinder sleep.
• avoids nervous tension and "jitters"[2] — simultaneous sedation is not required.[3]
". . . in clinical use the side-effects of nervousness, hyperexcitability, euphoria, and insomnia are much less than with the amphetamine compounds and rarely cause difficulty."[4]
References: 1) Gelvin, E. P., McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. 1:155, 1956. 2) Holt, J. O. S., Jr.: Dallas M. J. 42:497, 1956. 3) Nutenshan, A. L.: Am. Pract. & Digest Treat. 7:1456, 1956. 4) Council on Pharmacy and Chemistry, New and Nonofficial Remedies: J. A. M. A. 163:356 (Feb. 2) 1957.
PRELUDIN® (brand of phenmetrazine hydrochloride). Scored, square, pink tablets of 25 mg. Under license from C. H. Boehringer Sohn, Ingelheim.
GEIGY Ardsley, New York

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- floods tissues quickly, evenly
- compatible with ocular tissues and fluids
- eliminates cross contamination
- easily self-administered

supplied:

4 cc. plastic squeeze, dropper bottle containing ACHROMYCIN Tetracycline HCl (1%) 10.0 mg., per cc. suspended in sesame oil.

unsurpassed in antibiotic efficacy

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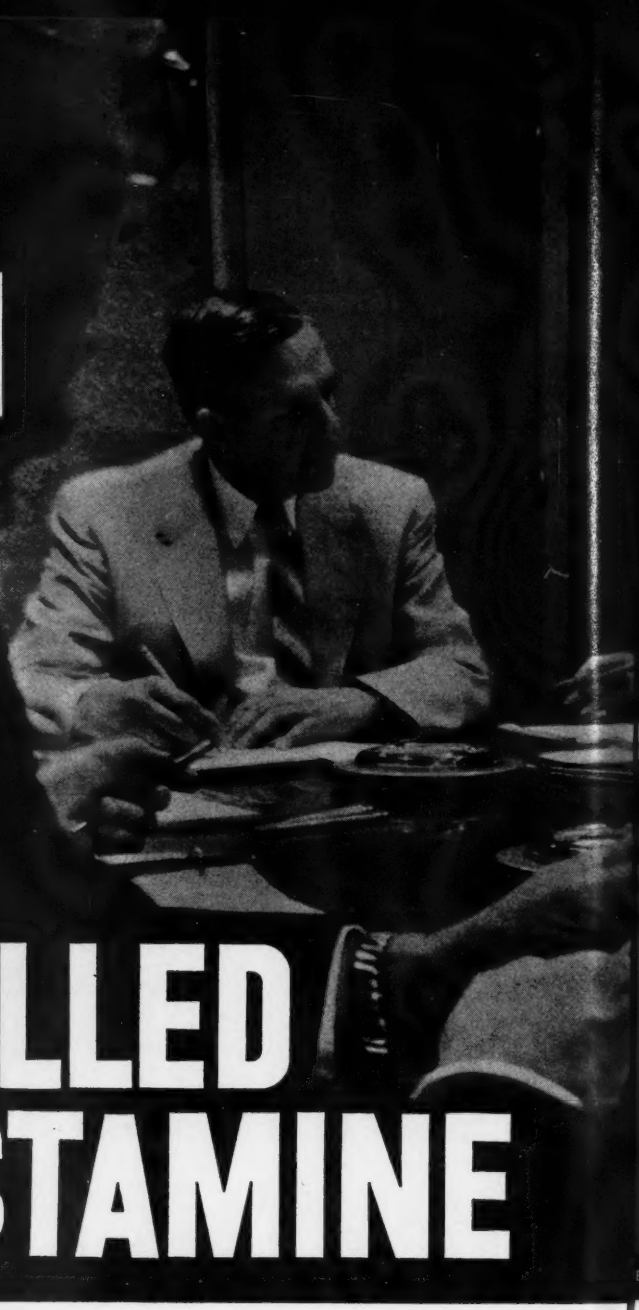

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Diagnosis	No. of Patients	Response				Side Effects
		Excellent	Good	Fair	Negative	
Allergic rhinitis and vasomotor rhinitis	30	14	9	5	2	Slight Drowsine s (3)
Urticaria and angioneurotic edema	3	1	1	1		Dizzy (1)
Allergic dermatitis	2		1	1		Slight Drowsine s (2)
Bronchial asthma	1		1			
Pruritus	1		1			
Total	37	15	13	7	2	Drowsiness (5) 13.2% Dizzy (1)

» unexcelled antihistaminic action

From the preliminary **Dimetane Extentabs** studies of three investigators. Further clinical investigations will be reported as com leted.

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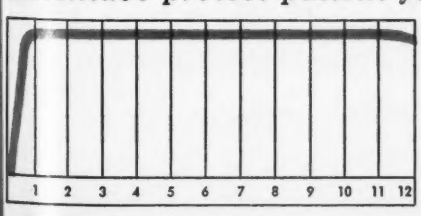
DIMETANE IS PARABROMDYLAMINE MALEATE — EXTENTABS 12 MG., TABLETS 4 MG., ELIXIR 2 MG. PER 5 CC.

a blanket of allergic protection, covering 10-12 hours—with just one Dīmetane Extentab **»** *DIMETANE Extentabs protect patient for 10-12 hours on <u>one</u> tablet.*



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Adults—One or two 4-mg. tabs. or two to four teaspoonfuls Elixir, three or four times daily. One Extentab q.8-12 h. or twice daily. Children over 6—One tab. or two teaspoonfuls Elixir t.i.d. or q.i.d., or one Extentab q.12h. Children 3-6—½ tab. or one teaspoonful Elixir t.i.d.

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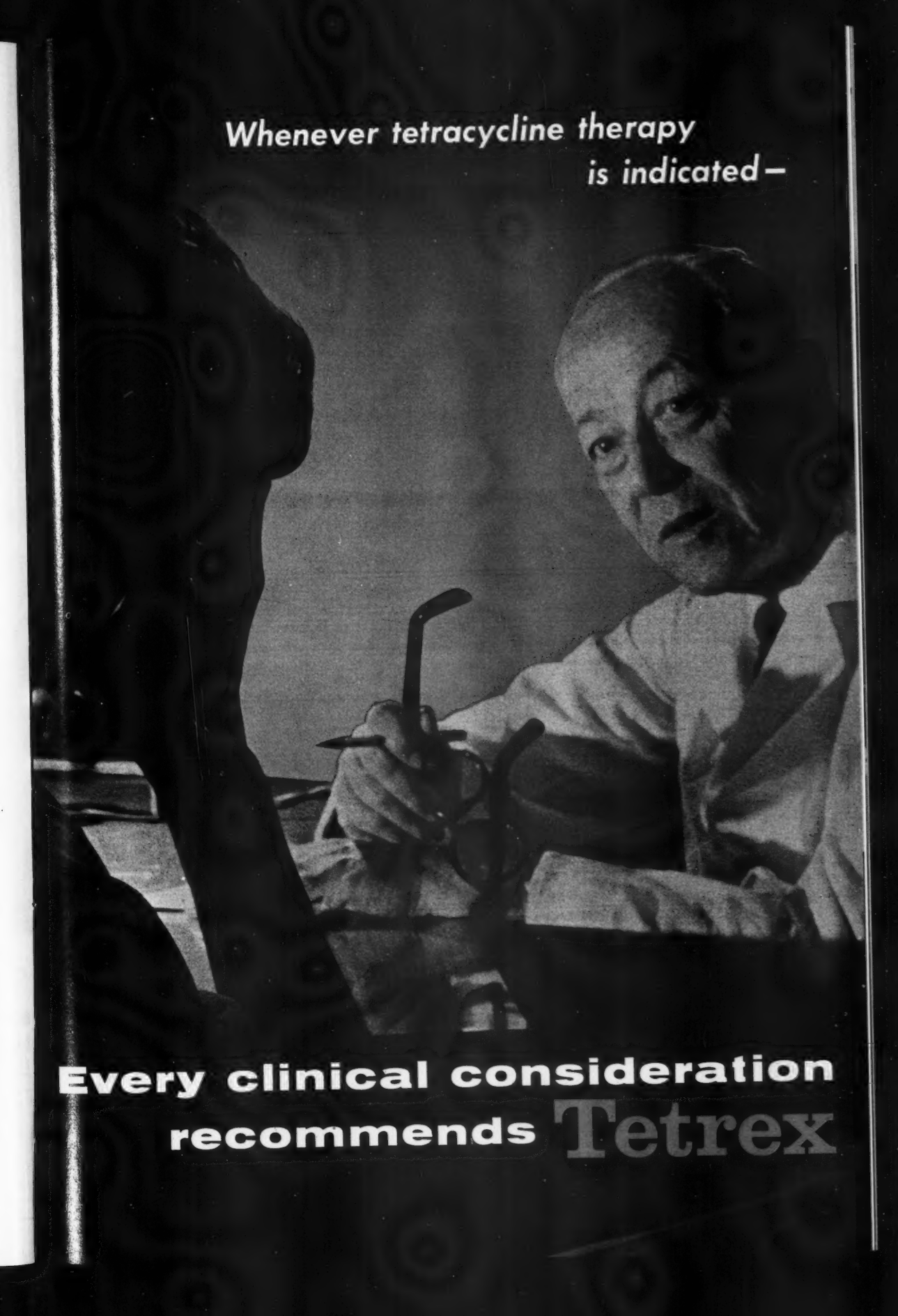
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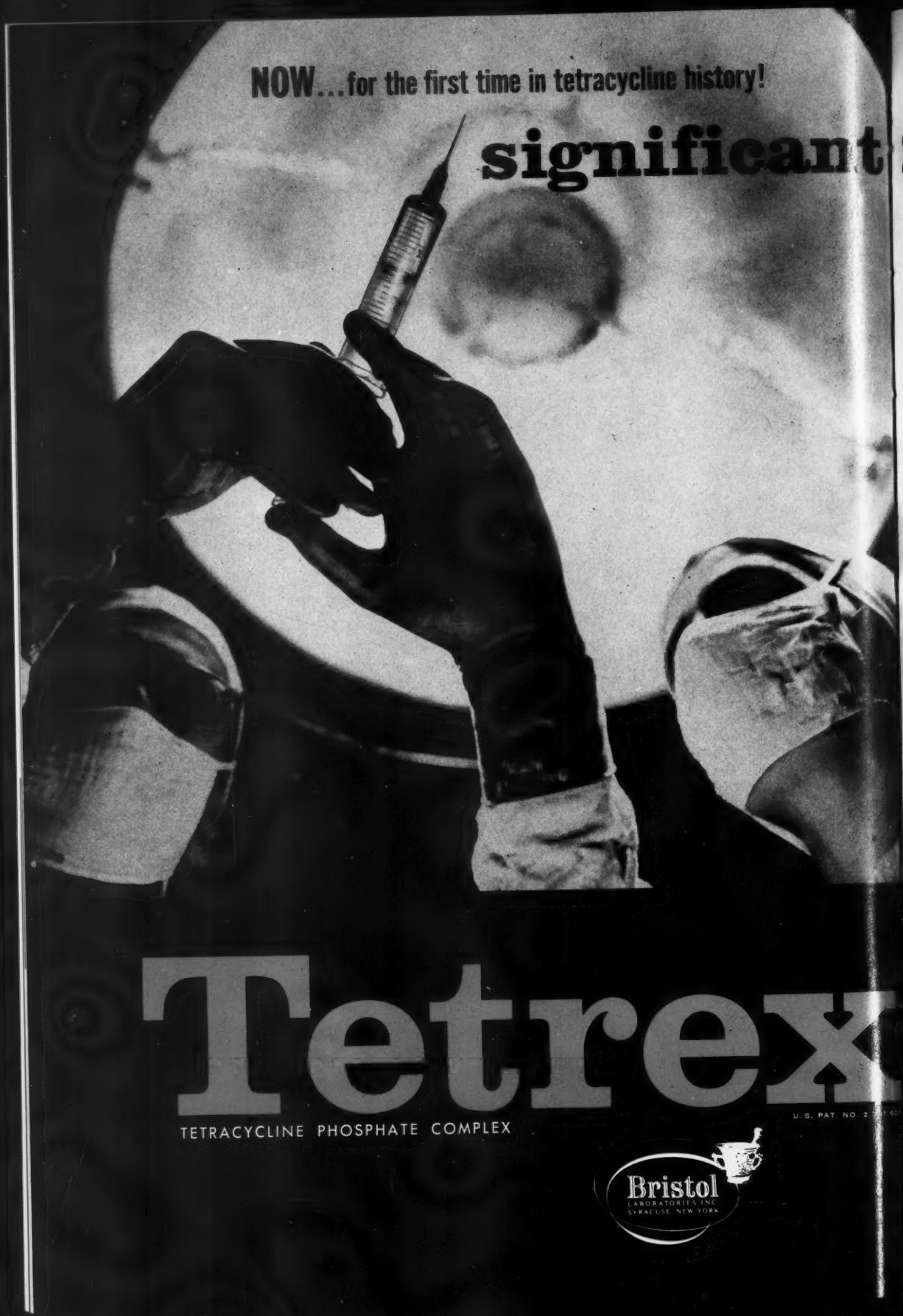
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24-hour blood levels

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This achievement is made possible by the unique solubility of TETREX (tetracycline phosphate complex), which permits *more* antibiotic to be incorporated in *less* volume of diluent. Clinical studies have shown that injections are well tolerated, with no more pain on injection than with previous, less concentrated formulations.

TETREX Intramuscular '250' can be reconstituted for injection by adding 1.6 cc. of sterile distilled water or normal saline, to make a total injection volume of 2.0 cc. When the entire 250 mg. are to be injected, and minimal volume is desired, as little as 1.0 cc. of diluent need be used. (Full instructions for administration and dosage for adults and children, accompany packaged vial.)

Each one-dose vial of TETREX Intramuscular '250' contains:

TETREX (tetracycline phosphate complex) (tetracycline HCl activity)..... **250 mg.**

Xylocaine* hydrochloride ..... **40 mg.**

plus ascorbic acid 300 mg. and magnesium chloride 46 mg. as buffering agents.

**® of Astra Pharm. Prod. Inc. for lidocaine*

SUPPLY: Single-dose vials containing TETREX – tetracycline phosphate complex – each equivalent to 250 mg. tetracycline HCl activity. Also available in 100-mg. single-dose vials.

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THE ORIGINAL TETRACYCLINE PHOSPHATE COMPLEX

for faster, more certain control of infection

- A single, pure drug (not a mixture)
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- Equally effective, b.i.d. or q.i.d.
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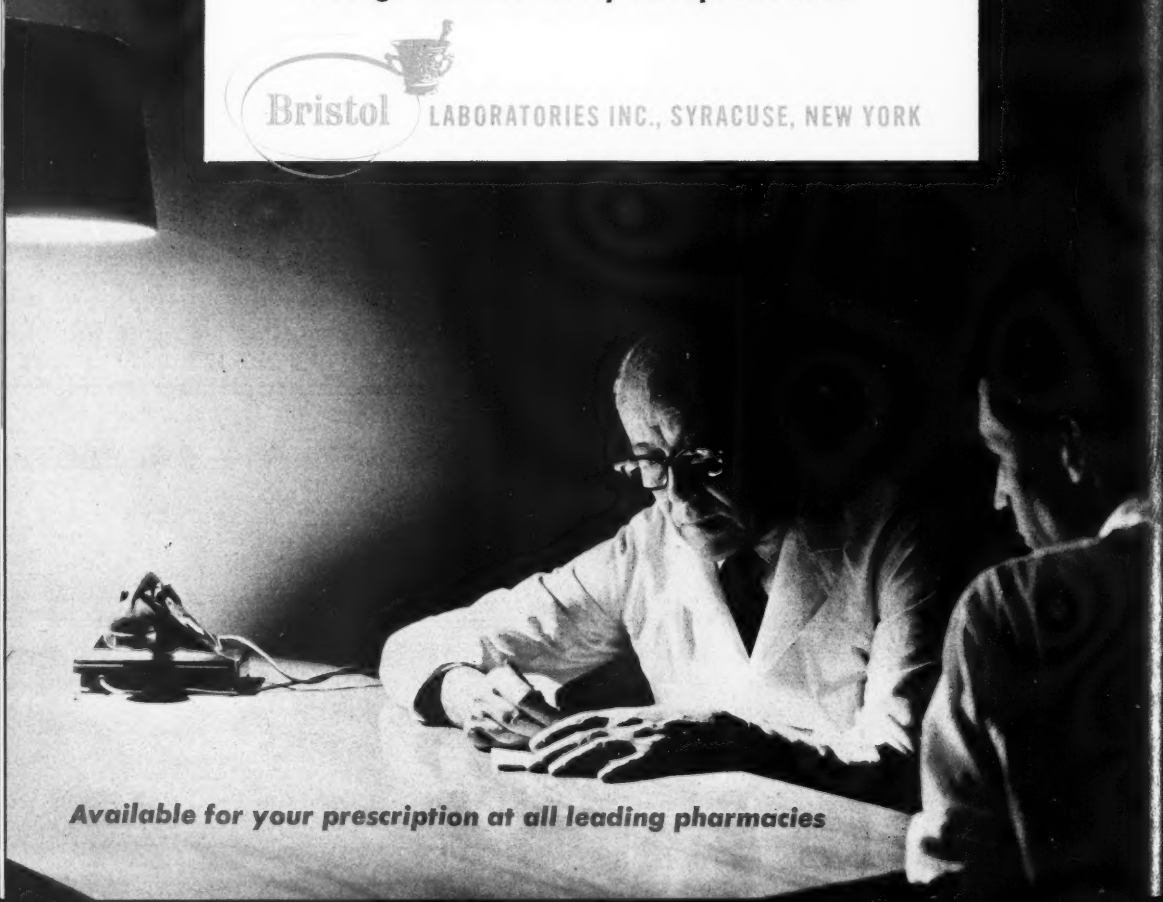

Available for your prescription at all leading pharmacies

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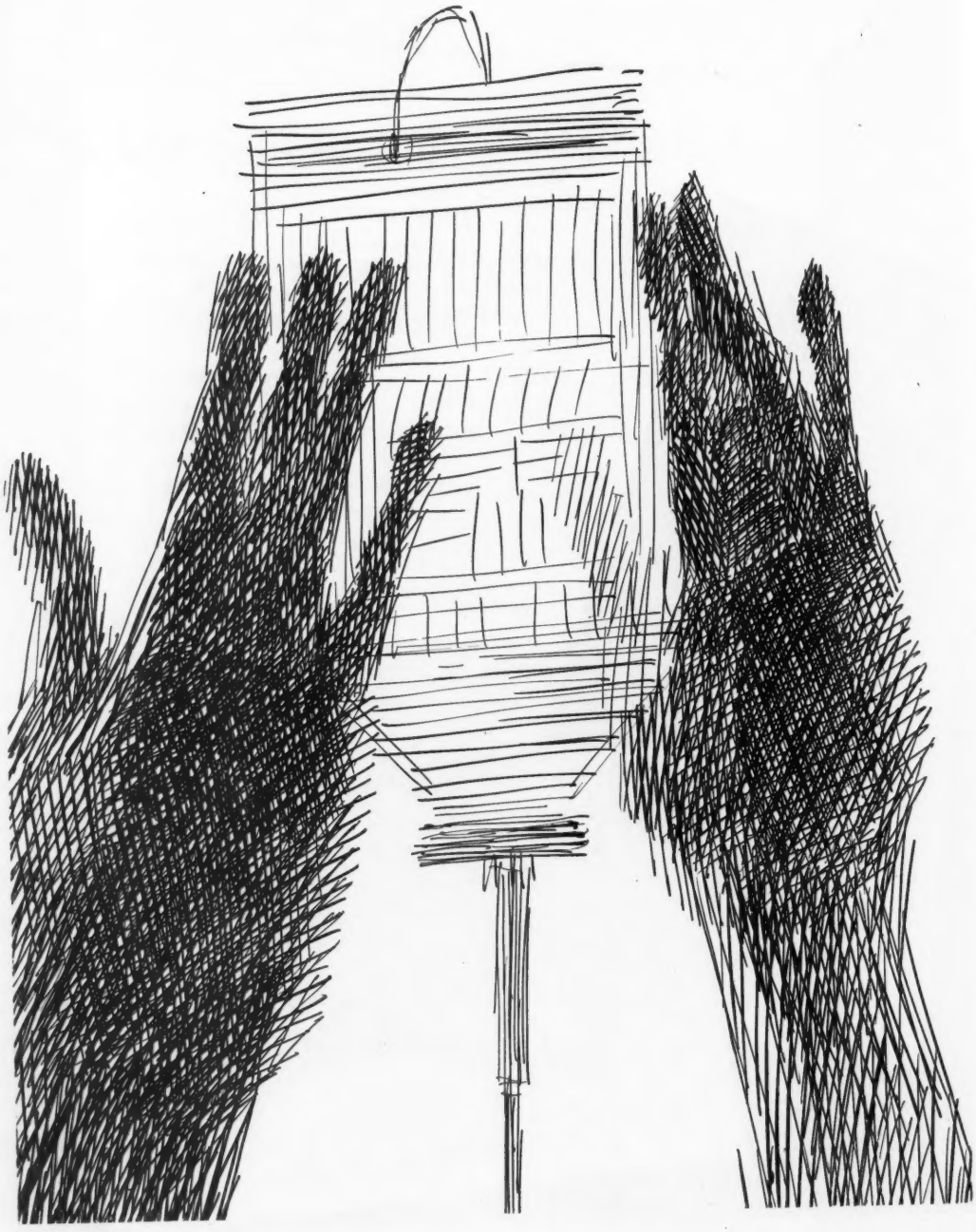
a new lifesaving antibiotic



discovered by Abbott Laboratories

SPONTIN®

(Ristocetin, Abbott)

A new, important antibiotic, SPONTIN, is now being made available—in limited supply—to the medical profession.

Discovered and developed by Abbott Laboratories, SPONTIN proved highly effective—even lifesaving—in clinical trials with *patients in whom other antibiotics had failed.*

Because of intricate and technical production problems, only a limited supply of SPONTIN is available currently. But, as soon as these problems are solved, SPONTIN will be offered to all hospitals.

For, essentially, SPONTIN is a drug for hospital use—for patients who are seriously ill, or even dying, from organisms that have become resistant to present-day therapy.

In its present form SPONTIN is administered intravenously, using the drip technique. The required dosage is dissolved in 5% Dextrose in water and administered in 35 to 40 minutes.

You'll find SPONTIN effective against a wide range of gram-positive coccal infections. And especially in those dangerous staphylococcal problems that resist other antibiotics. Some of the important therapeutic points include:

1) *successful short-term therapy for acute or subacute endocarditis*

2) *new antimicrobial activity—no natural resistance to* SPONTIN *was found in tests involving hundreds of coccal strains*

3) *antimicrobial action against which resistance is rare—and extremely difficult to induce*

4) *bactericidal action at effective therapeutic dosages.*

SPONTIN comes as a sterile, lyophilized powder in vials representing 500 mg. of ristocetin A activity. While distribution is limited, your emergency needs will be handled by your Abbott representative, or at the nearest Abbott branch. Literature is available on request.

Abbott

711285

New Chemotherapy

ARALEN® *in* RHEUMATOID ARTHRITIS

Extensive studies of rheumatoid arthritis and related collagen diseases—in this country and abroad—have shown the antimalarial Aralen phosphate to be highly effective and well tolerated in a large percentage of patients.

Clinical Results with Aralen in Rheumatoid Arthritis

Author	No. of Cases	Major Improvement	Minor Improvement	No Effect
Haydu[1]	28	22	5	1
Rinehart[2]	25	12	4	9
Freedman[3]	50	43	3	4
Bagnall[4]	108	77	12	19
Bruckner[5]	36	32	0	4
Cohen and Calkins[6]	22	17	3	2
Scharbel et al.[7]	25	9	8	8
Total	294	212 (72%)	35 (12%)	47 (16%)

- Success dependent upon persistent treatment
- Often of benefit where other agents have failed
- Remissions on therapy well maintained
- Remission of 3 to 12 months possible even if treatment is interrupted
- Tachyphylaxis not evident

GENERAL EFFECTS:

- Patient feels better
- Patient looks better
- Exercise tolerance increases
- Walking speed and hand grip improves

LABORATORY EFFECTS:

- E. S. R. may fall slowly
- Hemoglobin level may gradually rise

ANALGESICS AND STEROIDS:

- Requirements usually reduced or eliminated

JOINT EFFECTS:

- Pain and tenderness relieved
- Mobility increases
- Swellings diminish or disappear
- Muscle strength improves
- Rheumatic nodules may disappear
- Even severe or advanced deformity may improve
- *Active* inflammatory process usually subsides
- Joint effusion may diminish

DOSAGE:

Aralen is cumulative in action and requires four to twelve weeks of administration before therapeutic effects become apparent.

Latest information indicates that an initial daily dose of 250 mg. of Aralen phosphate is preferable to the higher doses sometimes recommended. However, if side effects appear, withdraw Aralen for several days until they subside. Reinstate treatment with 125 mg. daily and, if well tolerated, increase to 250 mg. The usual maintenance dose is 250 mg. daily.

New Chemotherapy

INDICATIONS:

- Rheumatoid arthritis, acute or chronic —with or without adjunctive therapy.
- Spondylitis
- Arthritis associated with lupus erythematosus or psoriasis

THEORY OF ACTION:

Aralen appears to suppress or induce remission of rheumatoid inflammatory processes by inhibiting adenosinetriphosphatase.

HOW SUPPLIED:

Aralen phosphate: 250 mg. tablets in bottles of 100 and 1000.
125 mg. tablets in bottles of 100.

Tolerance:

Aralen is usually well tolerated. Toxic effects are usually mild and to date have been transitory in nature, disappearing completely either on continuance or cessation of therapy or on reduction in dosage.

Gastrointestinal disturbances (e.g. nausea, rarely vomiting, diarrhea, abdominal cramps, anorexia) are frequent manifestations of intolerance. Temporary blurring of vision (due to interference with accommodation) is also relatively frequent.

Pleomorphic skin eruptions (e.g. lichenoid, maculopapular, purpuric), although generally mild, may preclude the use of an optimum dosage schedule. If a skin reaction persists on a reduced dosage schedule, or recurs after reinstitution of treatment with gradually increasing doses, discontinue Aralen till the lesion again disappears and consider resuming treatment with Plaquenil® (brand of hydroxychloroquine).

Less frequently transitory vertigo, headache, lassitude, or neurological disturbances, such as nervousness, irritability, emotional change, and nightmares have been reported. Instances of unexplained slight gradual weight loss as the patient's general health and arthritic condition improved have been mentioned. Occasional instances of bleaching (depigmentation) of the hair have been described.

Although an occasional instance of leukopenia, with normal differential count, has been reported (WBC about 3000), it has not proved troublesome because it has always been reversible on discontinuance, or diminution of the dose. Even spontaneous reversal may occur while full dosage is maintained.

Caution:

Aralen is known to concentrate in the liver and, although hepatic damage has never been reported, the drug should be used with caution in the presence of liver disease. In the presence of severe gastrointestinal, neurological, or blood disorders, the drug should be used with caution or not at all. If such disorders occur during the course of therapy, the drug should be discontinued. Concomitant use of gold or phenylbutazone with Aralen should be avoided because of the tendency of these agents to produce drug dermatitis.

Clinical Comments:

Of fifty patients receiving Aralen therapy, "43 have become really well; that is, they have no stiffness, and any pain that occurs can reasonably be attributed to use of joints affected by secondary degenerative changes. They have no evidence of joint inflammation, but may have a raised erythrocyte sedimentation rate. They have little or no need for analgesics." *Freedman*[3]

"One hundred and twenty-five private patients have been carefully followed clinically and haematologically while receiving well over 200 patient-years of chloroquine [Aralen] therapy. The results are considered good in 70%, one-half of these cases being in remission. Improved work performance, sedimentation rate, and hemoglobin levels paralleled the major objective gain in this 70%. 90% of them remained on chloroquine [Aralen] therapy, half for more than two years. Classical peripheral rheumatoid arthritis, spondylitis, arthritis of juvenile onset, and rheumatoid disease with psoriasis, all appeared to respond about equally well.

"It is suggested that chloroquine comes closer to the ideal for long-term, safe, control of rheumatoid disease than any other agent now available." *Bagnall*[4]

"Out of the 36 rheumatoid arthritis cases we treated . . . favorable results were obtained in 32 cases. *Bruckner et al.*[5]

References

1. Haydu, G.G.: Rheumatoid arthritis therapy; a rationale and the use of chloroquine diphosphate, *Am. J. M. Sc.* 225:71, Jan., 1953.
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7. Scherbel, A. L., Schuchter, S.L., and Harrison, J.W.: Comparison of effects of two antimalarial agents, hydroxychloroquine sulfate and chloroquine phosphate, in patients with rheumatoid arthritis. *Cleveland Clin. Quart.* 24:98, April, 1957.

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1. Murphy, H. L., and Klasson, D. H.: New York St. J. M. 57:1908, June 1, 1957

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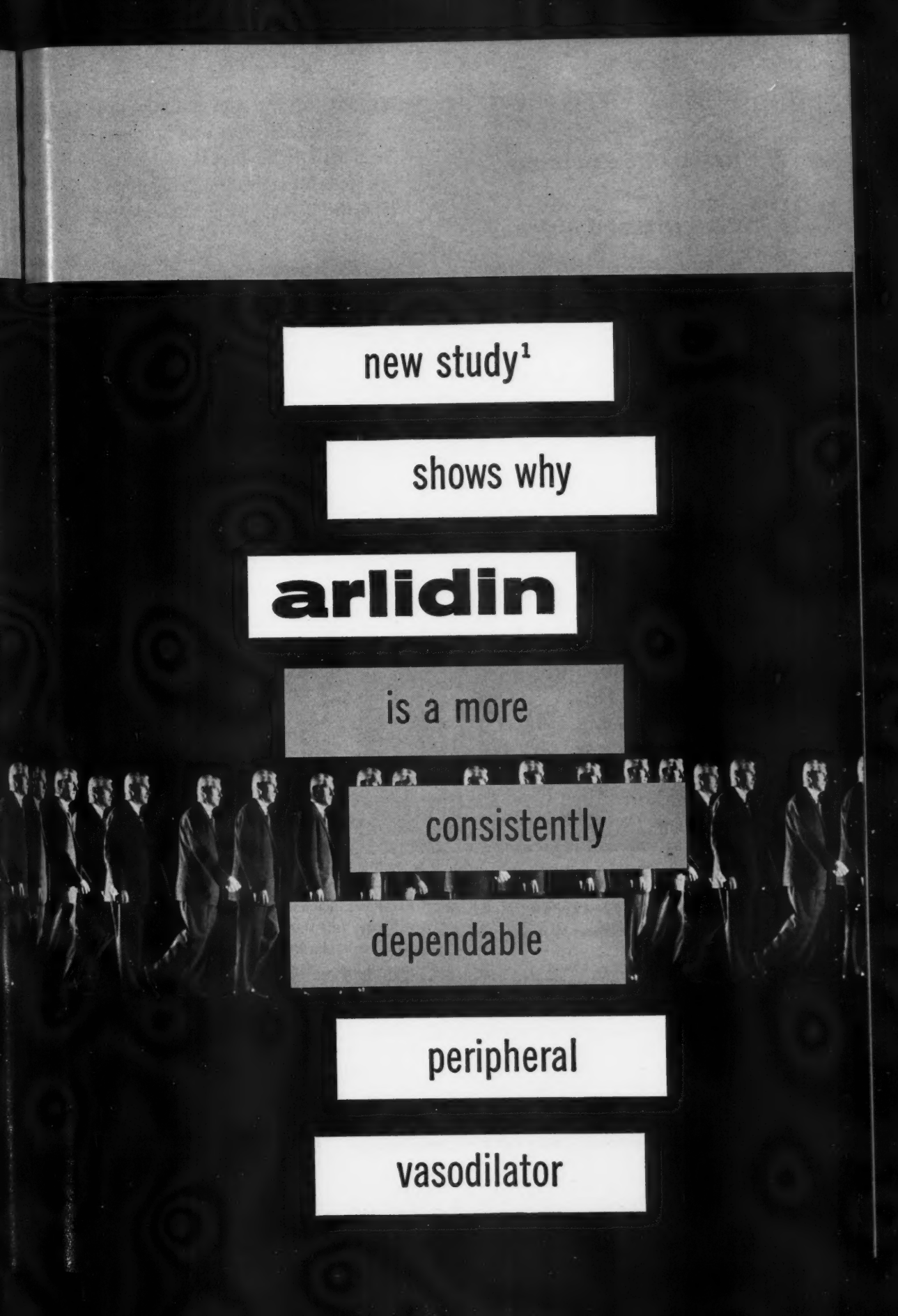
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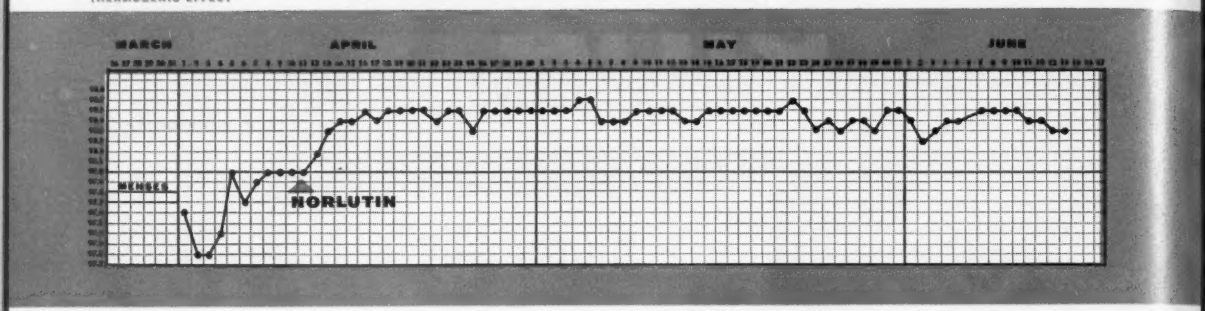

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*Greenblatt, R. B.: *J. Clin. Endocrinol.* **16**:869, 1956.

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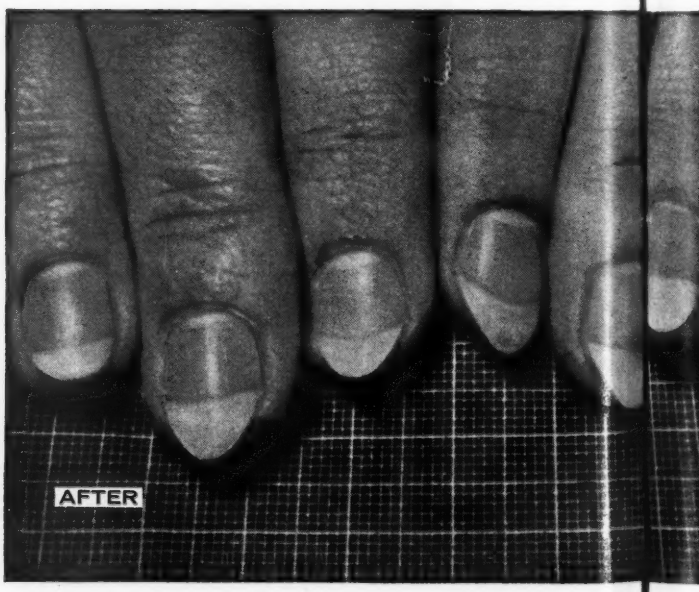

Evidence continues to accumulate verifying the effectiveness of Gelatine in the treatment of brittle fingernails. Investigators report that the nails show objective evidence of improvement.[1,2,3,4] Furthermore, patients often volunteer that their nails "feel stronger," "look smoother," and "I can pick up things without them hurting."[1] Evidently the subjective sensations associated with improvement are nearly as important to some patients as the positive physical change in the nails' appearance.

Improvement Noted in 81% of Patients

See the chart below for a summary of the effect of Knox Gelatine in brittle fingernails as observed in all published reports. Photographic evidence of improvement, much of it in color taken before and during treatment, is available for most of the patients.[1,2,3] Please note, however, that where Gelatine was used in the treatment of pathological conditions associated with brittle fingernails only in psoriasis did the data show definite improvement.[1,3,4]

Response to Gelatine in Brittle Fingernails

References	Dosage	Duration of treatment	No. patients w/ brittle nails	No. patients improved	No. patients w/ brittle nails and other pathology	No. patients improved
1. Rosenberg, S., Oster, K. A., Kallos, A. and Burroughs, W.: *A.M.A. Arch. Dermat* 76:330, (September) 1957	7 Gm./ day	3 months	50	43 (86%)	32[a]	9
2. Schwimmer, M. and Mulinos, M.G.: *Antibiot. Med. & Clin. Therapy* 4:403, (July) 1957	7.5 Gm./ day	11-16 weeks	18	15 (83%)		
3. Rosenberg, S. and Oster, K. A.: *Conn. State Med. J* 19:171, (March) 1955	7 to 21 Gm./day	15 weeks	36	26[b] (72%)		
4. Tyson, T. L.: *J. Invest. Dermat.* 14:323, (May) 1950	7 Gm./day	13 weeks	12	10[c] (83%)		
Totals	7-21 Gm.	11-16 weeks	116	94 (81%)	32	9 (28%)

a. Gelatine improved psoriatic nails in 5 out of 12 cases. In onychomycosis and other pathological conditions of the nail it was of no appreciable help.

b. Of the failures, 2 had congenital disease of the nails, 3 were diabetics and 3 took the medication for less than one month.

c. One patient with psoriasis and arthritis and one patient with psoriasiform nail changes showed improvement in 2 and 3 months respectively.

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Important Note

The pharmacodynamic effects of Gelatine are manifested through its high Specific Dynamic Action, and therefore, depend upon adequate and prolonged intake. All published clinical research has been conducted using 7 to 21 grams (1-3 envelopes) of Knox Gelatine per day for the three to four months that are required for complete regrowth of the nails. Smaller dosage would induce a lesser specific dynamic action and thus prove ineffectual in correcting the brittle nail defects. More detailed information on brittle fingernails and reprints of the two more recent clinical reports are available on request. Please use the attached coupon.

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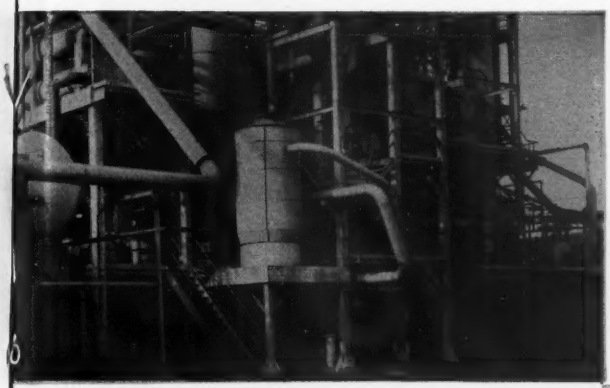

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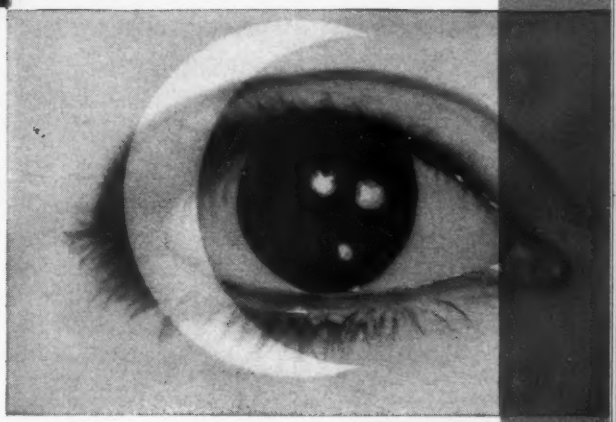

References

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2. Kuhn, H. S.: Tr. Am. Acad. Ophth. *55*:431, 1951.

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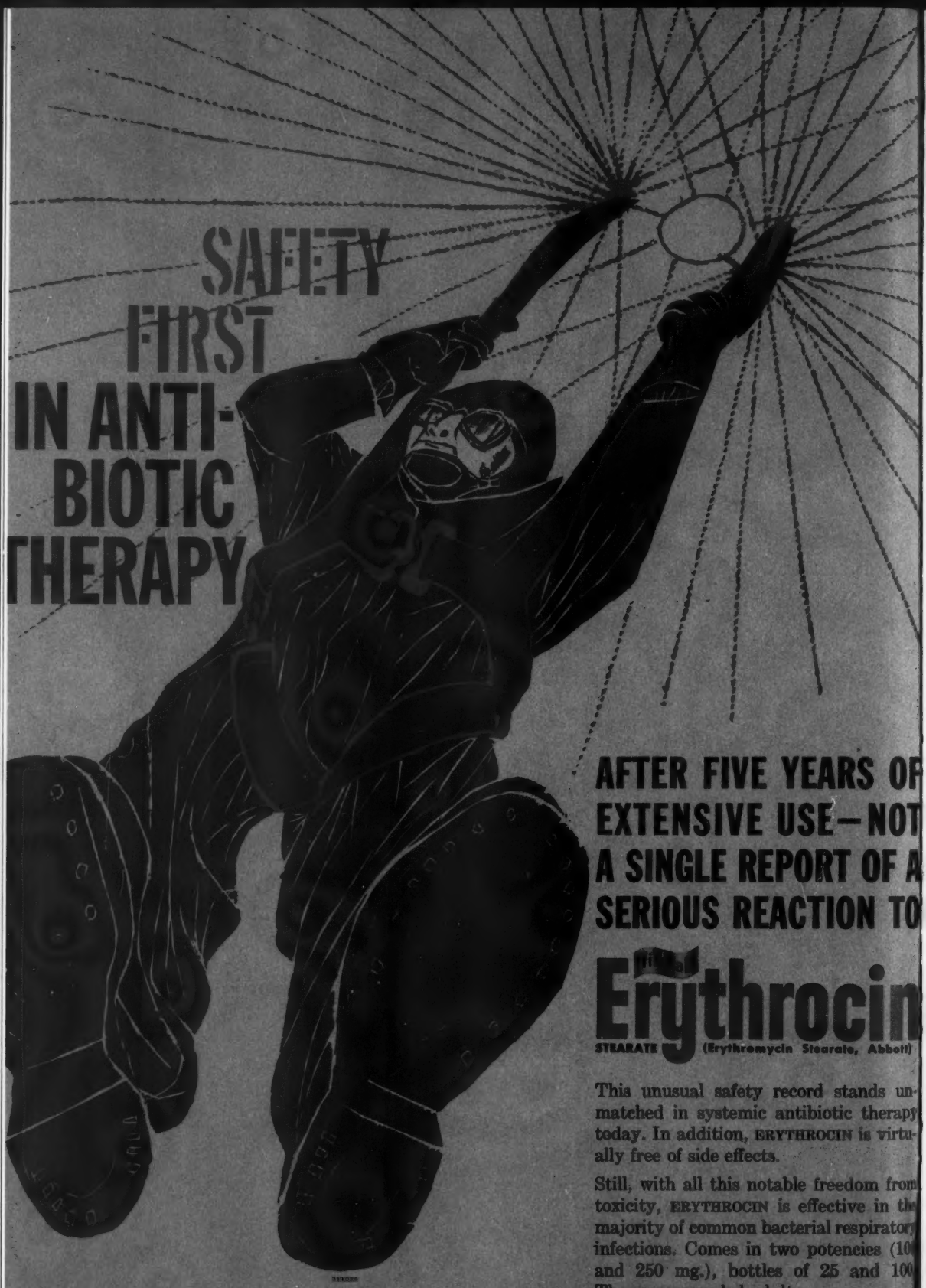

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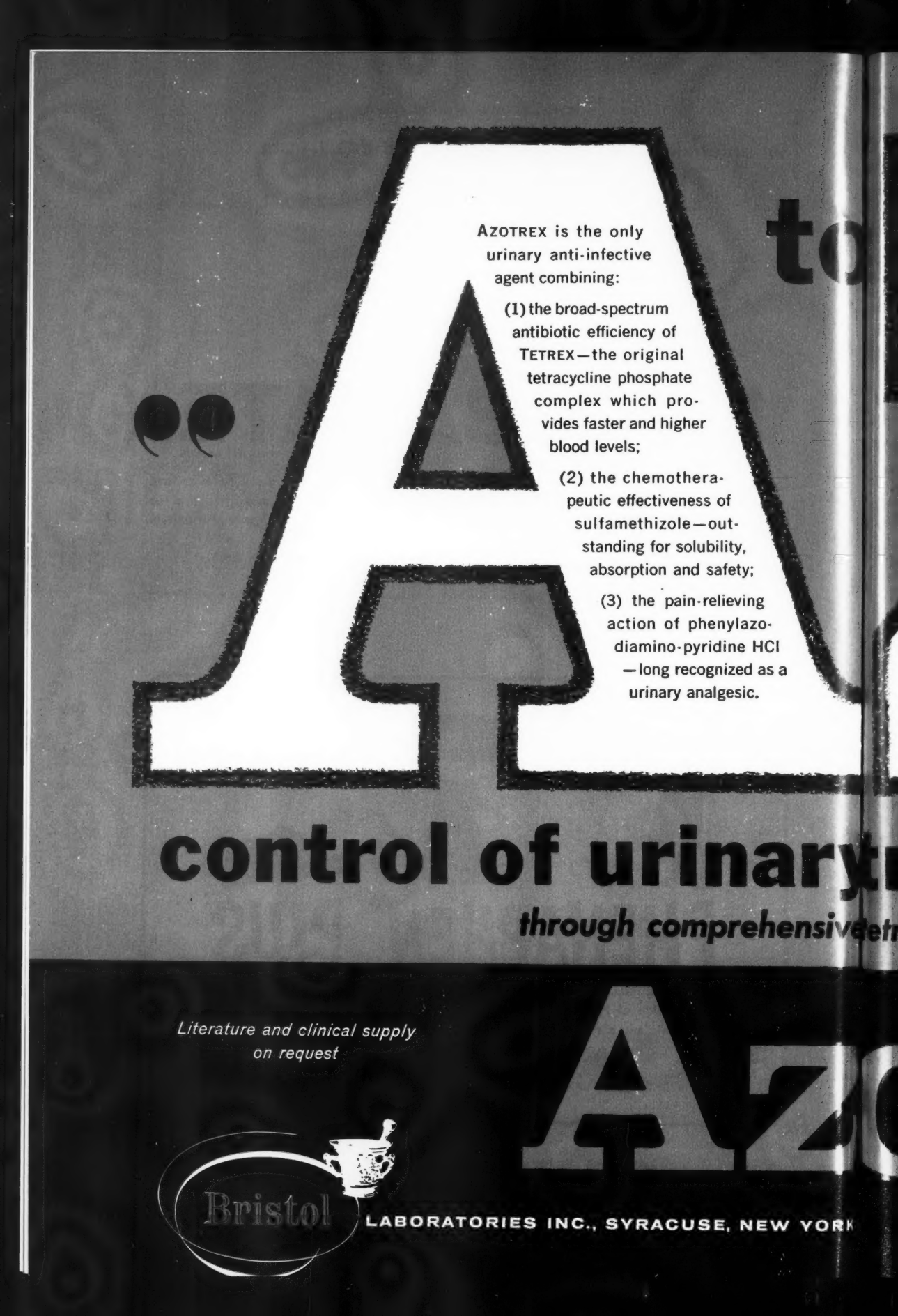
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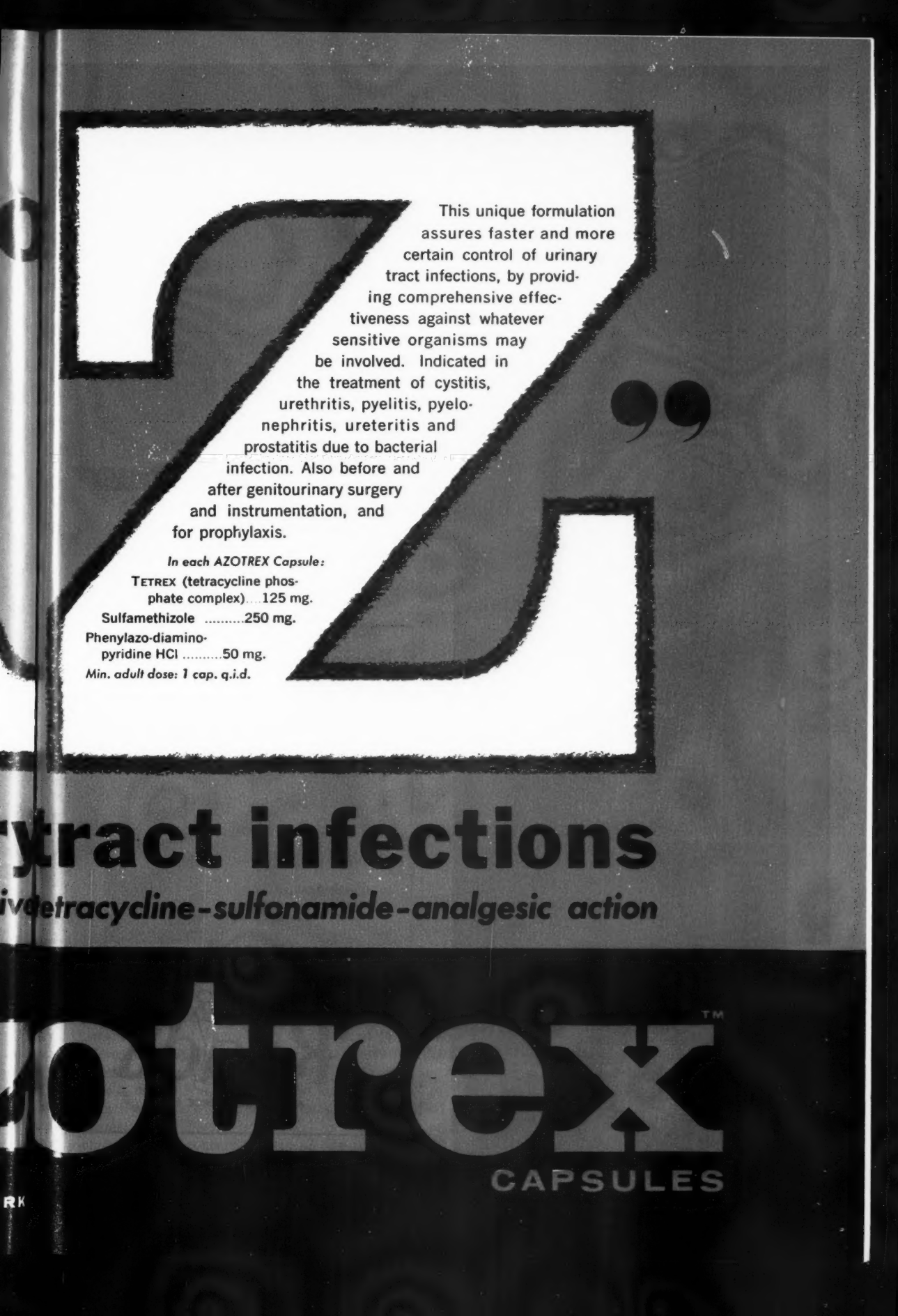
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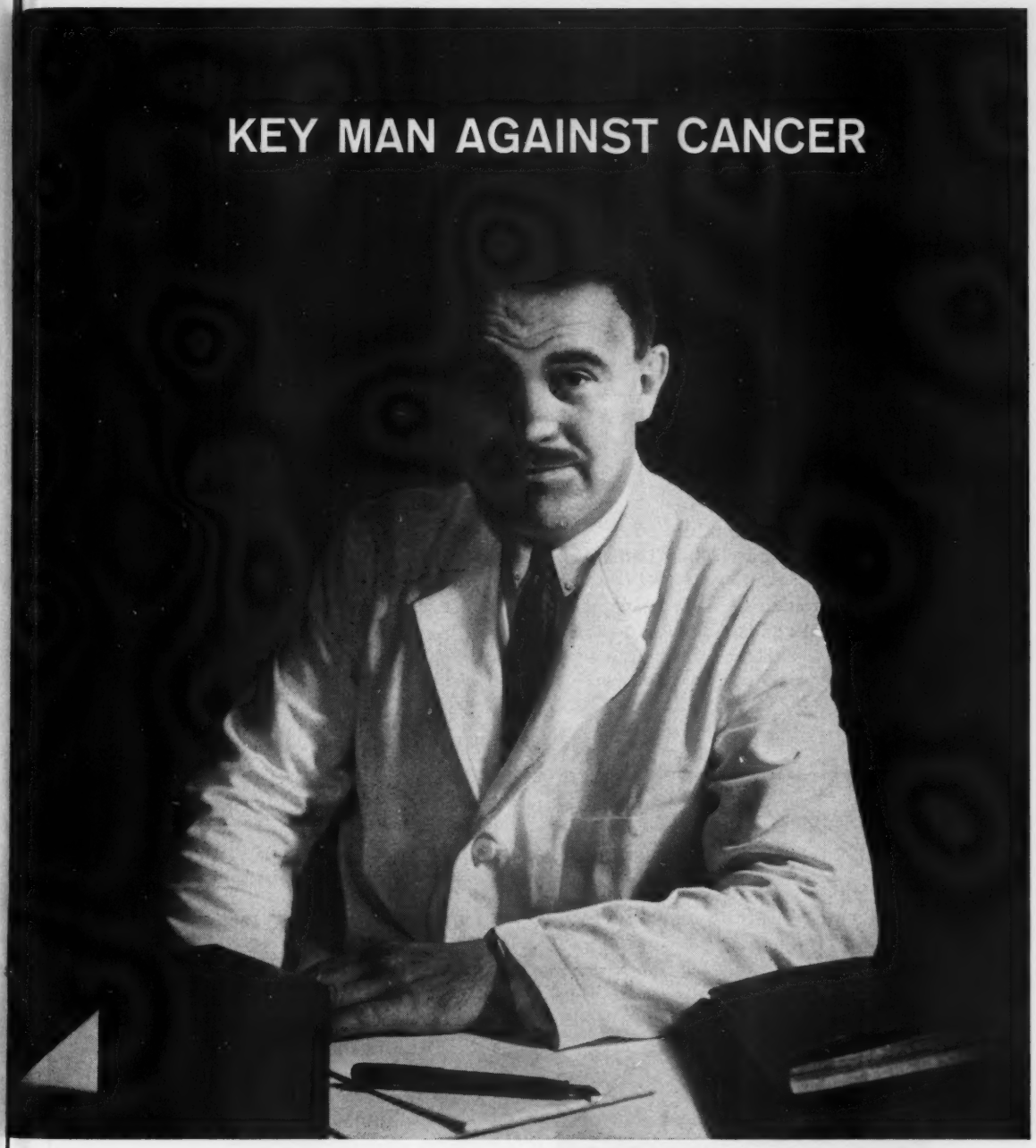

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(1) Asung, C. L.; Charcowa, A. I., and Villa, A. P.: Sea View Hosp. Bull. *16*:80, 1956. (2) Asung, C. L.; Charcowa, A. I., and Villa, A. P.: New York J. Med. *57*:1911 (June 1) 1957. (3) Report on Field Screening of Nostyn by 99 Physicians in 1,000 Patients, June, 1956.

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